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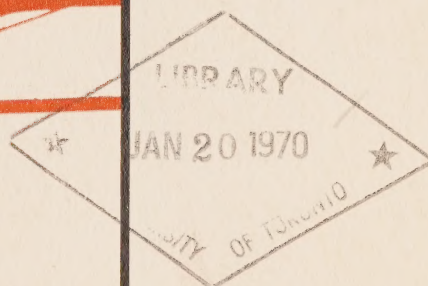


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ONTARIO

Commission and Committee of Inquiry

REPORT of THE COMMITTEE on UNIFORM BUILDING STANDARDS for ONTARIO



November
1969

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ONTARIO

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of THE
COMMITTEE
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UNIFORM
BUILDING
STANDARDS
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ONTARIO**

**November
1969**

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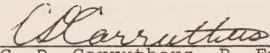
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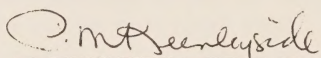
TO THE HONOURABLE W. DARCY McKEOUGH,
Minister of Municipal Affairs

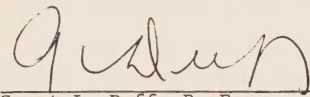
Mr. Minister:

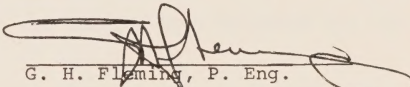
The Committee appointed by you on September 12, 1968, to study and investigate the feasibility of uniform building standards for the Province of Ontario has the honour of presenting its report.

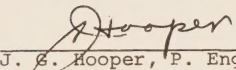
All of which is respectfully submitted,

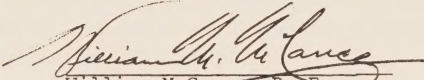

C. D. Carruthers, P. Eng.
Chairman

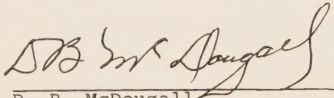

P. M. Keenleyside, R.A.I.C.
Vice-Chairman

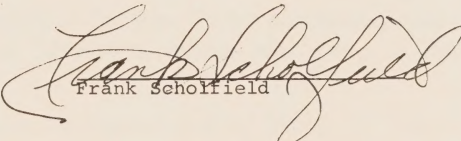

Grant L. Duff, P. Eng.

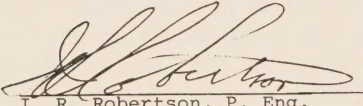

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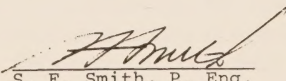

William McCance, P. Eng.


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Louis Sage, B.A.


S. F. Smith, P. Eng.

PREFACE

For a number of years, individuals and major building organizations in Canada have carried on a campaign for the adoption of the National Building Code of Canada by all municipalities.

By 1954, agitation for one national code was activated from many channels and the tempo increased yearly.

Throughout the sixties, many associations related to construction—architects, engineers, general contractors, Chambers of Commerce and homebuilders—at their annual meetings were passing resolutions and strongly advocating the general adoption of the National Building Code of Canada.

Their essential conclusions were that this would mean a saving in cost, whether in planning, designing, processing or in actual building, as a result of uniform building standards.

Around the beginning of 1968, the campaign shifted to urging the adoption of the National Building Code at the provincial level. It was becoming evident that individual municipalities, left on their own, would probably never all adopt the N.B.C. and, even if they did, would change its provisions substantially, thus defeating the objective of uniformity.

In February and March of 1968, the subject was broached for the first time in a provincial legislature.

On February 21 of that year, the Minister of Municipal Affairs, the Honourable W. Darcy McKeough, in replying to a question in the Legislature outlined the steps the government was prepared to take in considering a standard building code for the Province of Ontario.

Among other things, the Minister said, "I do not preclude the possibility of legislation to accomplish this most desirable goal."

A résumé of what was being done at the time by the community planning branch of the Department of Municipal Affairs was given to the Legislature.

On March 4, 1968, a resolution was introduced by Mr. J. W. Snow, MPP Halton East, in the Ontario Legislature reading as follows: "That the government of Ontario should adopt the National Building Code, standardizing building, fire and safety legislation and that this code should be made applicable to all residential, commercial and industrial buildings in all municipalities of the province."


Formal presentation of argument on Mr. Snow's motion took place; debate followed and the resolution received considerable support from a wide variety of quarters. Members from all three parties participated but in no case was there serious opposition.

Following this, in May 1968, Municipal Affairs Minister McKeough said that it was his intention to establish a small committee to examine, report and comment to government about uniform building standards. The report, he noted, should provide a base from which to decide the merits of uniform standards, the extent to which they should apply and the means whereby such an end may be achieved.

On September 12, 1968, the Minister announced the establishment of a Committee on Uniform Building Standards for Ontario, the Committee being composed of individuals who were knowledgeable and experienced about buildings and building by-laws to examine all essential facets of uniform building standards.

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SCOPE OF STUDY

Support for the principle of uniform building standards throughout Ontario is quite strong and the need quite evident. Yet there is not unanimity about how, when and to what extent the principle can be realized.

Opinions vary considerably. The following are the most significant or most often repeated and helped in defining the perimeters of the investigation:

- That the National Building Code of Canada should be made mandatory throughout the province*
- That the National Building Code is not suitable for all municipalities*
- That small municipalities are unable to administer and enforce performance by-laws in a responsible manner*
- That to derive full benefit from uniform building standards, a system is needed to ensure uniformity, consistent interpretation and enforcement of standards, approval of factory-produced units and building systems*
- That an appeal from the decisions of local building inspectorates is needed*
- That different legislative authority is required to meet the needs of today*

There are, of course, other views and none can be overlooked if the desirable goal of uniform building standards is to be achieved in Ontario.

Hence the decision of the Minister to appoint a committee with the directive to study these concerns, elicit the views of interested parties, and report about the feasibility of uniform building standards in the Province of Ontario.

OBJECTIVE OF COMMITTEE

The objective of the Committee was to determine if it was desirable and feasible to have a uniform building code for the Province of Ontario that would be mandatory for all municipalities and other provincial jurisdictions.

It was not the purpose of the Committee to write a code for building but rather to consider what existing code should be used as a base.

A further objective was to determine to what degree and in what manner existing provincial acts, regulations and department policies can be dealt with effectively. Could they be resolved to agree with the basic code recommended or must they be added to the basic code and how can this be accomplished?

Another objective was to determine what procedures would give uniform and effective enforcement and interpretation of the code in all municipalities of the province; and to determine what acts, regulations

and municipal by-laws now on the statute books will require study and possible revision or even repeal.

Finally, that the Province of Ontario will have a code for building that is rational in its requirements, free of provisions that lack a base in fact or proof, capable of enforcement without the development of a rigid or insensitive bureaucracy; one that is administered in a manner that allows the public ready methods of appeal as to content and enforcement, and that is capable of regular up-dating through efficient revision procedures.

REVIEW OF PROCEDURE

The Committee held its first meeting on October 17, 1968, which was attended by the Minister of Municipal Affairs, the Honourable W. Darcy McKeough.

The Minister explained the terms of reference and said the Committee should feel free to expand upon those terms if it would facilitate arriving at conclusions about uniform building standards for the municipalities and departments of the Province of Ontario.

Further Committee meetings were held on:

November 14, 1968

December 12, 1968

January 9, 1969

February 13, 1969

March 13, 1969

April 10, 1969

May 8, 1969

June 19, 1969

July 25, 1969

July 26, 1969 (Saturday)

August 21, 1969

All of these were formal full-day meetings with morning and afternoon sessions and one evening session on April 10, 1969. Since the last meeting, a draft of the final report was prepared and sent to the members of the Committee. Their comments were incorporated in a final draft, together with an extensive documentary appendices which was then edited for publication.

The discussions in November and December, 1968 (and, in part, January, 1969) explored the problems to be resolved and the sources of information to be followed up by the Committee in its investigation of the many acts and regulations of provincial departments concerned with building legislation.

From the beginning, the Committee recognized that it was not going to be a simple task to reach its objectives and that the study would need to be broad and thorough to cover all aspects of the problems of a uniform building code and its enforcement.

The review of the many acts and regulations brought to light some provisions that were both interesting and, in the light of present conditions, sometimes humorous.

A section of *The Municipal Act* dealing with fire prevention, for example, insists that "Every proprietor of a house more than one storey high shall place and keep a ladder on the roof of such house near to or against the principal chimney thereof and another ladder reaching from the ground to the roof of such house, under a fine of \$1.00 for every omission and a further fine of \$2.00 for every week such omission continues."

The same section stipulates that "Every householder shall provide himself with two buckets fit for carrying water in case of accident by fire, under a fine of \$1.00 for each bucket not so provided."

It also warns that "No person shall carry fire or cause fire to be carried into or through any street, lane, yard or other place unless such fire is confined in a copper, iron or tin vessel under a fine of \$1.00 for the first offence."

The Department of Tourism and Information Act appears to show an overriding concern for comfort in its regulation that "in every privy all wooden seats shall be of dressed material."

After hours spent sitting and combing through the legal jungle of acts and regulations, the Committee found this regulation to be oddly appealing.

No doubt there are similar examples in municipal by-laws.

The Committee decided on a questionnaire to all municipalities in Ontario that would provide a broad cross-section of opinions about the basis and implementation of a uniform building code for Ontario.

The questionnaire was sent to 964 municipalities (including all counties) and 648 returned the questionnaire with their answers. (For a tabulated record of the returns, see Appendix B.)

A questionnaire and invitation for briefs was sent to 40 associations and other organizations primarily connected with building construction regulations. Briefs were received from 29. (An analysis of the briefs compiled by a sub-committee is included as Appendix C.)

Many of the larger cities and towns commented in detail and other interested parties—individuals, municipalities and associations—offered concise statements, a representative list of which is contained in the appendices.

The Committee held interviews with senior officials of provincial government departments and agencies that have jurisdiction over the significant acts and regulations containing references—directly or indirectly—to building.

After a careful study of the opinions and comments received from municipalities and from all segments of industry and government, the Committee came to two important conclusions. These were, first, that the National Building Code should be adopted and, second, that there should be a plan for an orderly changeover from the established procedures now operating in the province and its municipalities.

There would have to be a period of transition before the N.B.C. could be adopted without change. During this time, provisions not now covered by the national code that are necessary to Ontario would likely have to be included in a supplementary document to be known as the Ontario Building Code.

The Committee felt, however, that there should be a study by all interests to find a means of eliminating the need for a supplement as soon as possible.

Based on these considerations, the Committee is prompted to make the following recommendations.

RECOMMENDATIONS

UNIFORM BUILDING CODE

- I. (a) *That commencing with the 1970 Edition, the National Building Code of Canada,* and a supplement, be adopted by the Province of Ontario to form a uniform building code that shall be mandatory throughout the province. This code would be called the National Building Code of Canada 1970 and the Ontario Building Code 1970, hereinafter referred to in this report as the National-Ontario Building Code.*

UNIFORM FIRE CODE

- (b) *That commencing with the 1970 Edition, the National Fire Code of Canada, and a supplement, be adopted by the Province of Ontario to form a uniform fire code that shall be mandatory throughout the province. This code would be called the National Fire Code of Canada 1970 and the Ontario Fire Code 1970, hereinafter referred to in this report as the National-Ontario Fire Code.*

LEGISLATION

- (c) *That the necessary legislation be introduced to provide for the adoption of the above proposed codes by January 1971 after full review of existing acts, regulations and department policies dealing with building in the Province of Ontario, in conjunction with the National Building Code 1970 and its associated documents and the National Fire Code of Canada 1970.*
- (d) *That the present acts, regulations, department policies and any other conflicting private act or municipal by-law, insofar as they deal with building, be repealed or revoked and replaced with the National-Ontario Building Code and the National-Ontario Fire Code at the time those codes come into force and, after coming into force, that no additions, deletions or amendments dealing with building be made except through the medium of those codes.*

INTERIM REVIEW COMMITTEES

- (e) *That two Interim Review Committees be formed immediately as follows:—*

- 1. A Code Review Committee** *to ensure a review (in co-operation with the departments concerned) of all acts, regulations and*

NOTE: The term "building" as used in this report includes matters related to fire prevention and fire protection and to the construction, demolition, alteration, renovation, maintenance and operation of a building structure or portion thereof where such matters relate to structural adequacy, safety and health.

*The National Building Code of Canada includes all associated documents. See Appendix G for the list.

department policies pertaining to building presently in force in the Province of Ontario and more specifically but not restricted thereto:

- (i) A review of provisions in the present acts, regulations and policies that are apparently the same as the requirements in the National Building Code 1970 or National Fire Code 1970. Where they are the same, they are to be eliminated in favour of the two codes.*
- (ii) A review of provisions in the present acts, regulations and policies that are different from the requirements of the National Building Code of Canada 1970 and the National Fire Code 1970 and either resolving them so that they agree with those codes, eliminating them or, if either of these procedures is impossible, compiling them in the supplementary sections of the above codes.*
- (iii) To review and prepare appropriate requirements to cover those matters not covered by the National Building Code 1970 and the National Fire Code 1970 that are deemed essential for Ontario and to compile these into a supplementary section of the National-Ontario Building Code and the National-Ontario Fire Code.*
- (iv) To review all legislation including municipal by-laws pertaining to signs, mobile homes, factory produced buildings and components and minimum maintenance standards for buildings and property and decide whether or not the legislation or municipal by-laws should form part of a building code and, if so, to what degree.*
- (v) To review representations that associations, municipalities and others may wish to bring to the attention of the Committee, with reference to matters covered by items I (e) (i-iv);*
- (vi) To co-operate with the Interim Enforcement Review Committee on any matters that may overlap.*

2. An Enforcement Review Committee *to work in co-operation with those members of the Ontario Civil Service appointed by the Minister of Municipal Affairs to assist the Committee in outlining a feasible organization for a Building Regulations Branch (see paragraph iv) and the duties of the members of that organization. In particular but not limited to the following:*

- (i) To examine the implications, financial or otherwise, that may arise between the province and the municipalities over recommendation III (Inspection) and detail the means of their solution.*
- (ii) To develop classifications for the branch of the Department of Municipal Affairs that will administer the codes.*
- (iii) To develop class specifications for inspectors.*

- (iv) *To develop the part of the code dealing with administration (Part I of National Building Code) that will be suitable for use in the Province of Ontario and its municipalities and similarly for the administration section of the National-Ontario Fire Code.*
- (v) *To develop procedures for uniform interpretation and enforcement of the National-Ontario Building Code and the National-Ontario Fire Code.*
- (vi) *To establish procedures by the Building Regulations Branch for approval of new materials or methods of construction or computer programs.*
- (vii) *To establish procedures for amendments to the National-Ontario Building Code and National-Ontario Fire Code.*
- (viii) *To determine what revisions will be required to The Municipal Act, The Planning Act, and any other provincial or private act, regulation, municipal by-law or provincial policy pertaining to building.*
- (ix) *To co-operate with Interim Code Review Committee on any matters that may overlap.*

ADMINISTRATION

II. That the Department of Municipal Affairs, which functions primarily to administer the system of municipal institutions in Ontario, be responsible for and administer:

- (a) The National-Ontario Building Code.*
- (b) The National-Ontario Fire Code.*
- (c) The Office of The Ontario Fire Marshal, presently with the Department of Justice and the Attorney-General.*
- (d) The Plumbing Code (Ontario Regulation 471).*
- (e) Those matters presently within the jurisdiction of the Department of Health pertaining to private sewage disposal systems.*
- (f) Those provisions of The Ontario Electrical Code dealing with electrical equipment and installations attached to or forming a part of a building.*
- (g) Those provisions and regulations of The Industrial Safety Act that relate to the construction, maintenance and operation of a building.*
- (h) The Construction Safety Act.*
- (i) The Trench Excavators Protection Act.*
- (j) The Elevators and Lifts Act.*
- (k) The Construction Hoists Act.*
- (l) Those provisions of any other act or regulation that have reference directly or indirectly to building as determined under I (e) 1 and which would be included in the supplementary section of the National-Ontario Building Code and the National-Ontario Fire Code.*

Inspection

- III. (a) That the Province of Ontario enact legislation (using as reference provisions of sections 4 to 13 of The Construction Safety Act 1961-62 insofar as they are relevant) to provide for the mandatory training and certification of inspectors in connection with the administration by the Department of Municipal Affairs of the subject matters set out under (a) to (l) of paragraph II.*
- (b) Wherever possible inspectors shall be appointed by the municipality although certain functions may require provincially appointed inspectors. All inspectors shall be subject to the certification of the Minister of Municipal Affairs.*
- (c) Different levels of certification shall be established depending on the scope and complexity of work to be dealt with and the size and population of the territory covered by any individual inspector. Provincially appointed inspectors will assist in those exceptional cases that are beyond the competence of the locally appointed inspector and will act in instances where suspension occurs.*
- (d) That general technical supervision and control of all inspectors on matters of code interpretation and enforcement shall be provided by the province.*
- (e) Senior provincial inspectors shall recommend to the Minister that inspectors who do not meet the required level of certification or performance of duty shall have certification withdrawn or be required to take further training to attain the necessary standards.*
- (f) The Department shall appoint the required inspectors in unorganized townships and territories and when a municipality neglects or refuses to make the appointments.*
- (g) The Department may require inspectors to be responsible for more than one municipality where population or amount of building does not warrant a municipality employing full-time inspectors.*
- (h) Wherever it is feasible the Department may make an inspector responsible for more than one of the divisions, included in the subject matters set out in (a) to (l) of paragraph II.*
- (i) Inspectors shall have the right of appeal to the Advisory Council (see paragraph V) on matters of interpretation, code enforcement, certification and dismissal without cause.*

BUILDING REGULATIONS BRANCH

- IV. That the Minister of Municipal Affairs set up a branch of his department to administer the National-Ontario Building Code and the National-Ontario Fire Code. The Committee suggests that there be a director responsible for the branch with an*

NOTE: Inspector means any person who will administer building and fire codes, as referred to in this report, examines plans and specifications or makes site inspections.

assistant director for the building code, and an assistant director for the fire code. Under these directors there would be regional and area supervisors. In addition, inspectors may be appointed for special projects such as factory-produced buildings and components and mobile homes.

ADVISORY COUNCIL

- V. *That the Province of Ontario enact legislation to provide for the creation of an Advisory Council. This council to have two divisions—one to deal with those matters that relate to the content of the codes and the other to deal with matters that affect the uniform enforcement of the codes. The council would advise the Minister on matters affecting the content or uniform interpretation and enforcement of the National-Ontario Building Code and the National-Ontario Fire Code. The membership of these divisions should be drawn from organizations outside the government service. There should be a chairman of the council and a vice-chairman of each division.*

More specifically, the division on codes shall:

- (a) Make interpretations about the intent of matters in the codes referred to it by any interested party.*
- (b) Review all official interpretations made of the codes, and all approvals of new materials or methods of construction. If deemed necessary, they will then be included in the code either through revision slips issued annually or through the five-year overall revision of the codes.*
- (c) Examine critically and advise on all proposed legislation, regulations and policies affecting building in terms of structural adequacy, fire, safety and health, with the objective of maintaining the uniformity of the National-Ontario Building Code and the National-Ontario Fire Code.*
- (d) Receive and consider requests and suggestions for revisions to the codes from any and every source and advise the Minister about revisions that should be made.*
- (e) All revisions and interpretations to be made in co-operation with the Associate Committee on the National Building Code and the Associate Committee on the National Fire Code.*

More specifically, the Division of Enforcement shall:

- (1) Make interpretations of the code within the context of the laws of Ontario.*
- (2) Periodically review class specifications and certification standards of inspectors.*
- (3) Keep under review and advise on the administrative procedures of the Building Regulations Branch for approval of new materials, methods of construction or computer programs.*

- (4) *Adjudicate appeals from inspectors on matters of certification, suspension of certification or dismissal without cause.*
- (5) *Consider appeals from the general public on all matters dealing with the administration and enforcement of the National-Ontario Building Code and the National-Ontario Fire Code.*

PLANNING ACT

- VI. *That The Planning Act, Revised Statutes of Ontario 1960, Chapter 296, be revised to provide the necessary authority to the municipalities, to adopt, if necessary, enforce and administer matters covered by the National-Ontario Building Code and the National-Ontario Fire Code in accordance with the recommendations in this report.*

MUNICIPAL ACT

- VII. *That The Municipal Act, Revised Statutes of Ontario 1960, Chapter 249, have deleted from it those matters that will be dealt with by the revised Planning Act.*

COMMITTEE'S FUTURE

- VIII. *That this Committee—The Committee on Uniform Building Standards for Ontario—not be dissolved but instead be adjourned and reconvened from time to time at the call of the chairman to advise the interim review committees on the aim and purpose of the recommendations during the time the committees carry out their task.*

COMMENTARY

This commentary is submitted to show the logical development of the Committee's deliberations and to put forward suggestions for possible procedures in implementing the recommendations.

UNIFORM BUILDING CODE

- I. (a) Early in its deliberations the Committee concluded that the National Building Code 1970 and its associated documents should form the base and the major part of a uniform building code for the Province of Ontario. During all subsequent discussions the Committee found no reason to alter this decision.

The advantages of such a code were considered indisputable:

- It would reduce the cost of construction caused by having to build in different ways in different municipalities.
- It would reduce the costs caused by short production runs, diverse inventories of manufacturers and construction under adverse weather conditions.
- It would simplify the approval of new materials and methods of construction.

The National Building Code of Canada and its associated documents are prepared as advisory documents by the Associate Committee on the National Building Code of the National Research Council.

This committee is made up of 24 Canadians, generally representative of all major phases of building in Canada and of most geographic areas.

The Associate Committee appoints advisory specialist groups in the fields of fire, health, structures and housing. It also maintains sub-committees covering all sections of the National Building Code to keep it constantly under review and up to date with the latest developments in the fields of building.

Revisions are issued annually for those matters that warrant updating, pending complete review and revision of the code at five-year periods.

Comments on the use of the National Building Code and suggestions for its improvement have always been welcome and, regardless of their source, receive careful consideration on their merit.

The permanent staff of the Division of Building Research of the National Research Council is available to carry out technical and secretarial work at the direction of the Associate Committee and this assures the independence of the code.

NOTE: See Appendix A for a summary statement about the National Building Code of Canada by Dr. R. F. Leggett.

The National Building Code is designed so that its provisions may be applied in every part of Canada. It allows for local conditions such as varying temperatures, winds, earthquake probability, soil types, snow loads and other factors which differ in various parts of the country.

No other Canadian building code—nor any other code on this continent—exists, that is prepared with equal competence, is under such regular scrutiny and is as sensitive to needed changes as is the National Building Code.

The Committee's investigation, mainly through the questionnaire to municipalities, indicated that a great many municipalities are using the National Building Code of Canada as the basis of their municipal building by-law.

The questionnaire was sent to 964 municipalities. Answers were received from 648, which is considered an adequate return of 67 percent.

The analysis disclosed that:

- 543 municipalities have a building by-law*
- 105 municipalities do not have a building by-law
- 280 municipalities do not use the National Building Code
- 209 municipalities use the short-form N.B.C.
- 159 municipalities use the long-form N.B.C.

The collated data indicated that of the 648 municipalities that replied, 368 were using the National Building Code in either the short or long form.

By population, this represents most of Ontario. On the basis of a population of 7,000,000, the 368 municipalities using the N.B.C. constitute 80 percent of the total.

(For more detailed analysis of the questionnaire, see Appendix B.)

It should be noted that some cities expressed the view that the National Building Code was not satisfactory for their particular areas and needs and it was for this reason they required their own building by-laws.

This is an argument, the Committee believes, that would be difficult to substantiate. The National Building Code is written with the knowledge that conditions do vary from area to area and its content provides for such discrepancies.

An invitation to submit a brief on a uniform code for Ontario was sent to 40 associations known to have an interest in building codes and the effect of codes on the Ontario economy.

Twenty-nine of these replied and all were in favour of the National Building Code. (A summary of these briefs is contained in Appendix C.)

*Included in this total are municipalities that have their own building by-law based on N.B.C. principles but with variations.

UNIFORM FIRE CODE

- I. (b) Building regulations are closely tied to the problems of fire prevention and protection. It was considered that, to achieve real uniformity, the National Fire Code should be adopted along with the National Building Code.

The National Fire Code of Canada is an advisory document prepared by the Associate Committee on the National Fire Code of the National Research Council.

This Committee is composed of some 20 Canadian citizens appointed by the Council, who are representative of the major fire prevention and fire protection interests in Canada.

The actual work of preparing new codes and revising existing parts is delegated to special technical committees so that the latest practices in fire prevention will be reflected.

As with the National Building Code, comments on the National Fire Code are welcomed and given consideration for the continued improvement of these codes.

The staff of the Division of Building Research of the National Research Council serves the Associate Committee on the National Fire Code for technical and secretarial purposes.

The National Fire Code is prepared in a manner that makes it applicable throughout Canada to municipal fire and building departments, provincial and other agencies.

The Committee considered that a review of the existing provincial acts and regulations dealing with fire prevention and protection was essential. It recommended that the Interim Review Committee should undertake this task in addition to its work with the National Building Code.

The same procedure as recommended for the building code would apply.

LEGISLATION

- I. (c) It was the decisive opinion of the Committee that there should be no delay in the adoption by the Province of Ontario of the National Building Code and the National Fire Code.

Therefore, it recommends that the necessary legislation be introduced as soon as possible and propose the date of January 2, 1971 for its recommendations to become effective.

- I. (d) The Committee considered this recommendation essential if the National-Ontario Building Code and the National-Ontario Fire Code are to be kept uniform throughout the Province.

Care would also have to be taken in future to avoid enacting legislation or promulgating regulations that would offset or supersede the requirements of the above codes. The objective is to have the two codes regulate and rationalize all matters pertaining to building.

INTERIM REVIEW COMMITTEES

- I. (c) The Committee recognized that considerable work would be involved in a review of existing acts, regulations and department policies to correlate them to agree with the national building and national fire codes and to add any needed provisions not covered by those codes and associated documents.

The committee also recognized that a great deal of work would be required to develop standards for the uniform enforcement of the codes.

Therefore, the committee recommends that two interim review committees be appointed to carry out this work simultaneously and that these committees proceed immediately with their task—even before legislation has been enacted authorizing the adoption of the recommended codes. (The proposed terms of reference of the two committees are set out in the recommendations.)

The membership of the Interim Code Committee should be chosen from associations whose members are conversant with building codes. It would be highly desirable if a substantial number of these members are serving or have served on the associate committees on the National Building Code and the National Fire Code or their related sub-committees.

In addition, there should be a representation from municipal administrators of building by-laws and from senior officials of provincial departments responsible for the administration of the acts, regulations and department policies in paragraph II (c) to (k) of the recommendations.

The membership of the Interim Enforcement Committee should be chosen from the government and from associations whose members have interest and experience in the administration of by-laws pertaining to building codes.

The committee's membership should include a senior representative from the Division of Building Research, National Research Council. There should be legal counsel (with special knowledge of building) from the Office of the Legislative Counsel.

The chairmen and vice-chairmen of these committees should be well informed about building by-laws and regulations and thoroughly objective about the matters under consideration. Both committees should have secretarial services.

The committees would be given authority to appoint sub-committees to carry out the various facets of the work so that the reviews of both committees will be completed within one year.

It is expected that the committees can resolve most of the provisions to agree with the two national codes. Where this is not found possible at the present time, the committees should make recommendations to the respective associate committee for future considerations.

Any differences from the National Building Code or National Fire Code would be listed as a separate supplement. Any additions to the requirements of the National Building Code and National Fire Code would be treated in a similar manner.

This will allow the adoption of the National Building Code and the National Fire Code as a whole, with the additions that are deemed essential for Ontario listed in the supplement.

ADMINISTRATION

- II. The question of which Ontario Government department should administer the National-Ontario Building Code and the National-Ontario Fire Code received long and careful study. It was agreed that it was neither advisable nor necessary to create a new department.

Among the ministries considered were the Department of Labour, the Department of Public Works, the Office of the Fire Marshal of the Department of Justice and Attorney General and the Department of Municipal Affairs.

The Committee also explored the idea that the administration of the code might be placed with a commission or similar agency. This was ruled out because of the need for close collaboration with government departments and agencies and with municipalities.

The Committee was of the opinion that the desired co-operation and collaboration could best be achieved under one of the existing ministries.

Finally, it was agreed that the Department of Municipal Affairs, which already has close contact with all municipalities of Ontario and is responsible for the administration of *The Planning Act*, should be the department to administer the codes.

Within the government at the present time the administration of acts and regulations pertaining to building is distributed among many departments. It was the view of the Committee that all acts and regulations affecting building should be under the department chosen to administer the codes.

Hence, the recommendation that the Department of Municipal Affairs administer those acts and regulations presently covered by sections (a) to (l) of paragraph II of the recommendations.

In the Committee's judgment, this innovation will alleviate the problems now encountered by the public, improve the services to the public and bring about a reduction in effort and cost to all concerned.

INSPECTION

- III. No other subject created more discussion than inspectors and inspections.

The term inspector is used here in its broadest sense and means any person who administers building and fire codes, examines plans and specifications or makes site inspections.

A questionnaire specifically on building inspection was sent to 443 of the larger municipalities by the Ontario Building Officials

Association. (Mr. I. R. Robertson is Secretary-Treasurer of that association as well as a member of the Committee. For the O.B.O.A. report, see Appendix 'D'.)

Not surprisingly, the questionnaire revealed that throughout the province there is a host of officials under many authorities inspecting different phases of building. This condition arose in part because of the lack of a uniform building code and fire code.

In the past, many departments of government—including local governments—concerned with a specific problem have attempted to set up uniform regulations designed to cope with their specific concerns. This individual approach often fails to relate a problem in one area to a similar problem in another simply because the total problem was not theirs to recognize and solve.

Inspectors with a particular interest in inspecting parts but not the whole is the natural outcome of such a situation.

Lack of a uniform provincial building code and fire code caused municipalities either to write their own code, adopt in whole or part the National Building Code—or have none at all.

The municipalities, in turn, appointed inspectors for administration of the local code.

The effect of such action has been to generate a maze of regulations—frequently overlapping and conflicting—that cause duplications in inspection, that create parts inspectors who are sometimes at cross purposes with other parts inspectors, and that encourage inspectors to rely on individual interpretation of codes and regulations.

The Committee realized that the successful implementation of uniform codes depended to a great degree on the abilities of inspectors to ensure uniform interpretation and uniform enforcement.

The question of where to place the inspecting authority was discussed at great length.

The possibility of having a central provincial authority, regional authority, or municipal authority was considered.

The Committee did not rule out any of these possibilities. Each, at the present time, may have a legitimate function in specific areas of the province or with specific problems.

The immediate presence of a municipal authority in the area of building and planning was considered to have great weight and importance.

Obvious problems exist in this area that require careful investigation bearing in mind present conditions and future probabilities. It was for this reason the Committee recommended that an interim review body study the problem in detail.

The Committee believes strongly that inspectors must be properly trained—free and able to render uniform interpretations of the codes in all municipalities.

The Committee is also convinced that this work cannot be done in isolation. Inspectors must co-operate with other divisions of municipal government that have related interests in, or whose work involves them in building.

The questionnaires to the municipalities and to associations brought forth a strong consensus that training courses for inspectors were necessary.

Sixty-nine percent of municipalities replying were in favour of a training course for inspectors. It was considered vitally necessary to raise the standard of inspection to as high a level as possible and as quickly as possible if a useful degree of uniform enforcement was to be achieved.

The Committee came to the conclusion that the province was the only medium to undertake the task of training inspectors. Permissive legislation should be passed if necessary and a series of mandatory training courses inaugurated, extended over a term of years.

These courses should be repeated, when necessary, because of revisions to the codes.

Based upon such training courses, a level of certification for the inspectors could be determined which would be subject to adjustment up or down, depending upon observation in the field.

The Department of Education could provide guidance and help in establishing these courses and successful training courses already operating should be used in developing and carrying out the educational program.

The publication of manuals on code provisions and inspection procedures should be instituted and given high priority. When possible, aids to promote uniformity of plan examination and on-site inspection should also be developed.

As the province would be responsible for the training and certification of inspectors, the Committee concluded that it should also have some measure of control over their appointment.

The actual appointment would depend upon the particular function of the inspector and the authority under which his current appointment was made.

Nevertheless, some consistency in the qualifications of inspectors throughout the province would be needed. The Committee therefore recommends that the Department of Municipal Affairs be responsible for the certification of inspectors irrespective of the origin of their appointment.

The new system might take some time before it is fully operative throughout the province and there likely would be a transition period with tentative certifications.

The Committee realizes that occasions could arise, as has happened in the past, where municipalities neglect or refuse to make the necessary appointment or when inspectors are confronted with certain impediments in carrying out their proper duties.

The Department of Municipal Affairs should then have the authority to make the appointment.

Further, the Department should have the authority to make one inspector responsible for more than one municipality or for more than one of the functions listed in paragraph II—Administration. This procedure could greatly reduce the myriad number of inspectors presently inspecting individual parts or conditions.

The Committee recommends that inspectors have the right of appeal to the Advisory Council on any matters that may arise in the course of their inspection duties, their certification, classification, and for dismissal without cause.

BUILDING REGULATIONS BRANCH

IV. The Committee visualizes this branch as a government organization set up to carry out the day-to-day administration of the National-Ontario Building Code and the National-Ontario Fire Code.

It is the branch the public could consult on matters relating to building. Since it covers the whole field, it would ease the problem of multiple contacts presently required and the conflicts that now occur.

While the composition and responsibilities of this branch are a matter of internal organization, the Committee has in its recommendations outlined suggestions for its structure.

ADVISORY COUNCIL

V. Based on a principle that has worked well with the National Building Code of Canada—that the persons who administered the code should not be responsible for writing it—the Committee concluded that the Advisory Council should be composed of two groups, each with different personnel and distinct qualifications.

Division of Codes

The Division of Codes would have the responsibility of writing and keeping up to date the National-Ontario Building Code and the National-Ontario Fire Code. It is anticipated that this body will act in co-operation with the associate committees of the National Building Code and the National Fire Code.

The Committee does not believe that amendments would normally be made to the Ontario codes that would not be made in the national codes.

The Advisory Council (Division on Codes) would make interpretations on the intent of technical matters that are in dispute as to the meaning of provisions of the codes, but would work in close liaison with the National Research Council, Division of Building Research, to avoid any lack of uniformity here.

Membership of the Advisory Council (Division on Codes) would be similar to that provided by the parallel Interim Committee.

Division on Enforcement

Occasions are bound to arise when certain provisions of the codes are challenged as to their legality or when the legal interpretation is at variance with the intent of the code writers.

With uniform codes in the province, this should not happen as frequently as it has in the past. In the event it does, this division of the Advisory Council would act in a quasi-judicial capacity and render its decision.

It would also advise the Building Regulations Branch on procedures for approving new materials and methods of construction; on the classification of inspectors of the several grades of certification, and on the duties and responsibilities of inspectors.

The division would have the responsibility of passing judgment on the appeals of inspectors on matters of their certification or dismissal without cause.

(In Appendix E, Committee member Stuart F. Smith examines the complexities of approving and certifying new materials and methods of construction.)

The division would adjudicate appeals and complaints from the public on all matters involving the administration of the codes. It would advise the Minister on how to deal with any problems that appear to be creating complaints.

THE PLANNING ACT AND THE MUNICIPAL ACT

- VI. To give the new procedures a legal standing, *The Planning Act* and and *The Municipal Act* will have to be revised to authorize municipalities to adopt, enforce and administer the National-Ontario Building Code and the National-Ontario Fire Code. Municipalities should not be authorized to enact their own by-laws in connection with building.
- VII.

APPENDICES

APPENDIX A

“The National Building Code of Canada 1965”, by R. F. Legget, reprinted from *Canadian Building Digest*, Division of Building Research, National Research Council, June 1965.

Since building in Canada has to be carried out in conformity with appropriate regulations, it appears to be useful to include in this series of Digests a summary statement about the National Building Code of Canada. The fourth edition of this publication has just been released and copies are now available. The notes that follow refer to the 1965 Code but no basic changes, other than those to be noted, were made from the 1960 edition. Much of what is said, therefore, applies also to the use of this earlier edition by municipalities that may already have adopted it.

Municipalities in this country have the power to regulate building within their area by reason of a delegation of authority from their respective provincial governments, usually through the Municipal Act. Control is specifically in the interest of public safety. As buildings have become more complex, so municipal building regulations have become more comprehensive, until today those of the major cities comprise fair-sized volumes. Public safety, however, remains paramount, with structural sufficiency, proper fire prevention measures, and adequate provisions for public health the three bases upon which all such regulations must rest.

Since municipalities across Canada have developed from greatly differing origins, in different ways and at different rates, it is not surprising that there have been wide variations in local building regulations, even between those of adjacent municipalities. “The chaotic building code situation” has often been blamed for apparent lack of progress in building when this has been under popular attack. Today, 65 per cent of the population of this country that resides in organized areas has the benefit of local building bylaws based on the National Building Code, if indeed the Code itself is not being used directly as the local regulation; and of the 161 Canadian cities, 138 now use the National Code in one way or another. With the promise of wider adoption of the new edition, Canada may be within reasonable distance of having effective uniformity of building regulations from coast to coast through the use of the NBC.

Preparation of the Code

The Code itself is an advisory volume only, unless it is legally adopted for local use by an appropriate enabling bylaw. This can readily be passed by any municipal council under powers granted to it by the provincial government. When the Code is put to such legal use it becomes the local building regulation, with such amendments as may be necessary to take care of special local circumstances. In time, these exceptions should gradually decrease. The Code is naturally drafted in such a way that climatic vari-

ations across the country are taken into full consideration. Specific requirements that depend on climate are related to the basic climatic data for the locality in question. These can be provided by the Code Secretariat in Ottawa, one of the many services that supplement the document itself.

The Code is published as a public service, at the cost of printed copies, by the National Research Council. Responsibility for its preparation and maintenance as an up-to-date document has been delegated by the Council to its *Associate Committee on the National Building Code*. This is a national group of twenty-four leading members of the construction industry in all its phases, drawn from all parts of Canada. The members serve voluntarily, each appointed as an individual and not as a representative of any special group, each for a three-year term of service. The Associate Committee determines all policies for the Code and is directly responsible for its many services. Specialist committees in various technical fields are appointed by the Associate Committee to assist it with the drafting and revision of the several parts of the Code and its associated supplements.

Through the Division of Building Research, the staff of the NRC provide the necessary secretarial services, and the research officers of DBR/NRC give the necessary technical support, but only in an advisory capacity, the Associate Committee being entirely responsible for what does or does not go into the published Code. The official link between the Committee and the working staff of the Council is provided by the Chairman of the Associate Committee since, by direction of the Council, he is also the Director of the Division of Building Research.

Meetings of the Committee are generally held at about six-month intervals. Between these main meetings the many technical committees hold their working sessions, their recommendations finally coming before the Associate Committee for approval and implementation. In order to maintain the independent position of the Code and to ensure that all who are interested in it receive exactly the same consideration, it is a fixed policy of the Committee to receive all suggestions for improvement or change only in writing.

Comments upon all sections of the Code are welcome at all times from anyone interested enough to submit them. All are most carefully considered, and drafts of new or revised documents are made available for public comment before issue. In these and similar ways the Code has steadily achieved the status of a truly national document, a continuing tribute to the voluntary work of architects, engineers, contractors, house builders, public officials, trade unionists, manufacturers and others who have served and are serving on the many committees that have now resulted in the greatly improved 1965 edition.

The 1965 Edition of the Code

The new edition is available as either a slim blue-bound volume or a series of loose-leaf pamphlets conveniently secured in a strong binder. The basic arrangement remains unchanged. This resulted from a major research study that led to the appearance of the 1953 edition in loose-leaf (and bound) form, an achievement generally regarded up to that time as an impossibility. Clue to the arrangement was the segregation of all those requirements

of buildings that relate to their *Use and Occupancy*, irrespective of the construction material. Part Three remains the core of the Code, with the title just noted. It has been much improved over its form in the 1960 edition, but its basic approach to the functional requirements of buildings remains unchanged.

Part One provides the necessary provisions for the *Administration* of the Code when it is used as a bylaw. Part Two contains the corresponding legal *Definitions* of the main terms used in the body of the Code, grouped here as a matter of convenience. Part Five is a small section dealing with *Materials*, almost all of which are covered by standard specifications, to which an *Appendix* provides a useful guide. Removal of most of these references to other documents from the text of the Code itself makes it a better document from the legal point of view, without interfering with the convenience of those who use it. These several administrative parts of the Code are published, for the loose-leaf version, as one pamphlet.

Part Four deals with structural *Design* and is the largest portion of the Code. It is divided into seven Sections dealing, respectively, with *Loads and Procedures*, *Foundations*, and then detailed design procedures for *Masonry*, *Wood*, *Concrete*, and *Structural Steel*, with a final short section on *Cladding*. Typical of the co-operative work that distinguishes the Code, the sections on Wood, Concrete and Steel Design are shared jointly with the Canadian Standards Association. That on Wood was prepared first for the Code and passed to CSA for their use. The reverse is the case with the Structural Steel section. For the new section on Reinforced Concrete design, a special joint committee was established by the Associate Committee and CSA. The resulting document is one of the major new features of the 1965 edition. It breaks new ground in its field in ways that will be described in forthcoming technical papers.

Parts Six and Seven required little change from their appearance in the 1960 edition other than the necessary "up-dating." *General Services*, such as heating and ventilation, are dealt with in the first of these parts, and *Plumbing Services* in the other. *Construction Safety Measures* are dealt with in Part Eight. Questions have been raised as to the correctness of including reference to safety measures in a municipal building bylaw, because such safety precautions are usually administered by provincial agencies. The Associate Committee has, however, been encouraged to continue to issue Part Eight if only as an educational part of the Code, although it is also a useful guide to proper safety measures and does not conflict with provincial requirements.

Residential Standards, 1965

Part Nine of the new Code is somewhat unusual. It is entitled *Housing* and is quite short, yet it is comprehensive in its coverage of the main elements in residential construction. Close examination of the document will show that the new Part Nine is truly a "performance code," of the type so often lauded in theoretical discussions of code preparation. Taken by itself, Part Nine is a useful document, though very limited in its application, since all detailed requirements are continued in one of the seven Supplements to the Code—No. 5, *Residential Standards, 1965*. This is a complete guide

to good practice in residential construction, except for such major matters as structural design that are adequately dealt with in the rest of the Code. It represents a consolidation of the previous *Housing Standards*, issued as Supplement No. 5 to the 1960 edition of the Code, and the "Apartment Standards" previously published by the Division of Building Research of the National Research Council.

Originally, both the Housing and Apartment Standards were published by Central Mortgage and Housing Corporation. The two documents were used by the Corporation as their regulations for the control of residential construction under the National Housing Act, which CMHC administers. It was clearly desirable to have the responsibility for these two documents in the hands of some agency other than the Corporation itself. As a first step, they were passed over to DBR/NRC to publish. The appearance of the *Residential Standards 1965* as a part of the 1965 Code is therefore the final phase of a carefully planned development. For the first time all regulatory documents for the control of building in Canada are combined under the aegis of the National Building Code. CMHC uses Supplement No. 5 as its own regulation under the terms of the National Housing Act. Municipalities using the Code may now also use Supplement No. 5 for the control of all other housing within their borders, with no conflict between municipal and NHA requirements.

Other Supplements

Six other special technical documents supplement the Code in a variety of ways. Supplement No. 1 presents a schedule of information regarding climatic requirements for most of the larger municipalities of Canada, together with a set of climatic maps that give a useful general idea of climatic variations within this country. Supplement No. 2 is an entirely new document, now entitled *Fire Performance Ratings, 1965*. Instead of presenting, as did its predecessor, a long list of tabulated test results, this document gives a simple analytical approach to the calculation of fire performance ratings for a variety of building material combinations. It is of such importance that a separate Digest will be devoted to it later this year.

Supplement No. 3 is a useful compilation of shape factors for the calculation of wind loads on structures, with additional information on snow loads. The fourth supplement presents a set of sketches, which illustrate the detailed requirements of Part Seven of the Code (Plumbing), and so aid in its rapid interpretation. Supplement No. 6 is a set of recommended practices for the design of *Farm Buildings* other than houses. Published for the first time in 1964, it is a pioneer document that has already attracted international attention in view of the critical attention now being given to the better design of buildings for agricultural purposes.

The last Supplement, No. 7, presents a simple set of design requirements for making buildings convenient for the use of handicapped citizens, its exact title being *Building Standards for the Handicapped*. When it is realized that one Canadian in every seven has a permanent physical disability or an infirmity associated with aging, the need for some attention to this large group of citizens will be at once apparent. It can be said that no document

yet issued by the Associate Committee has given the members such pleasure as this, even though it can now be seen that its preparation should have been initiated long before it was. The Supplement sets out desirable requirements for ramp entrances, widths of doors to take wheeled chairs, and similar details of design that cost almost nothing if incorporated into original building plans, but which can make all the difference to the convenience of handicapped citizens. The document is advisory only, but with the support already promised for its promotion in all parts of the country, it will probably be put to good use, and on a wide scale, in the immediate future.

How to Obtain the Code

It can be suggested with appropriate certainty that there should be a copy of the 1965 edition of the National Building Code of Canada, and of its supplements, in every architectural and engineering design office in Canada. Copies of the Code may be obtained for \$4 a copy, either bound or loose-leaf (i.e. \$8 for both versions), with the supplements costing \$2 a set.

Orders and inquiries should be addressed to:

The Secretary,
Associate Committee on the National Building Code,
c/o National Research Council,
Ottawa.

A price list for all Code documents will gladly be sent by the Secretary upon request; all Code documents are published in both of Canada's languages. Payment of this one charge ensures the receipt not only of the documents ordered but of all revision slips that may be issued before the next edition appears, as well as regular copies of the *NBC NEWS*, a bi-monthly news sheet that keeps its readers fully informed of Code developments in Canada and elsewhere, as well as about new publications of use to those who possess copies of the Code.

APPENDIX B

ANALYSIS OF QUESTIONNAIRE TO MUNICIPALITIES AND SUMMARY OF COMMENTS

PART 1—Letter from Chairman to Municipalities

January 3, 1969

To All Municipal Clerks:

The Committee on Uniform Building Standards for Ontario would like your assistance in their deliberations respecting their study of having a uniform building code for the Province of Ontario.

This Committee has been set up by the Minister of Municipal Affairs, the Honourable W. Darcy McKeough, to examine, report and comment to him on the merits of uniform standards, the extent to which they should apply and the means whereby such an end may be achieved.

We are interested in your opinions and request that you reply to the following questions not later than January 24, 1969.

1. Do you have a building by-law for your municipality?

Yes ——— No ———

2. What is the date of the latest issue of your by-law?

3. Do you use the National Building Code of Canada?

a) Long form Yes ——— No ———

b) Short form Yes ——— No ———

4. If so, what issue of that code do you use

1953 ——— 1960 ——— 1965 ———

5. If not, what code or by-law do you use as a guide?

6. What sections of the National Building Code do you find satisfactory or unsatisfactory for your use?

	<i>Satisfactory</i>	<i>Unsatisfactory</i>
(a) Part 1 — Administration	_____	_____
(b) Part 3 — Use & Occupancy	_____	_____
(c) Part 4 — Design Section	_____	_____
(d) Part 6 — Building Services	_____	_____
(e) Part 9 — Housing	_____	_____
(f) Short Form Code	_____	_____

7. Have you a building inspector?
Yes ——— No ———
8. How many permits did you issue in 1968? —————
9. What was the value of permits issued in 1968? —————
10. In your opinion, is a training course for building officials desirable?
Yes ——— No ———
11. Would your building inspector attend such a course?
Yes ——— No ———
12. Name of municipality —————
13. Population in 1968 —————
14. Any further comments you may wish to make?

Yours very truly,

C. D. CARRUTHERS
Chairman

PART 2—Tabulation of Returns from Municipalities

TABLE I—ANALYSIS OF QUESTIONNAIRE ON USE OF N.B.C.

<i>Municipalities</i>	<i>Number of municipalities that answered questionnaire</i>	<i>Number of municipalities that use N.B.C.</i>		<i>Number of municipalities using long or short form</i>		<i>Municipalities that do not use the N.B.C.</i>	
		<i>Number</i>	<i>Population*</i>	<i>Long Form</i>	<i>Short Form</i>	<i>Number</i>	<i>Population*</i>
TOWNS	116	95	872,000	49	46	21	57,900
VILLAGES	91	47	66,500	15	32	44	32,800
TOWNSHIPS	395	186	807,600	60	126	209	350,400
CITIES	32	32	2,681,000	31	1	0	—
BOROUGHES	5	3	694,000	3	0	2	543,000
IMPROVEMENT DISTRICTS	9	5	7,200	1	4	4	4,800
TOTALS	648	368	5,128,300	159	209	280	988,900

*Resident population only. Summer and winter resort population not calculated due to lack of information.

Population of Ontario: 6,905,000
Total municipalities: 960

TABLE II—ANALYSIS OF MUNICIPALITIES BY BUILDING BY-LAWS

<i>Municipalities</i>	<i>Number of municipalities that answered questionnaire</i>	<i>Municipalities which have a building by-law</i>	<i>Population* covered by building by-laws</i>	<i>Municipalities which do not have a building by-law</i>	<i>Population* not covered by building by-laws</i>
TOWNS	116	107	899,100	9	22,790
VILLAGES	91	74	91,700	16	11,500
TOWNSHIPS	395	318	1,085,200	78	81,800
CITIES	32	32	2,681,000	0	0
BOROUGHs	5	5	1,237,000	0	0
IMPROVEMENT DISTRICTS	9	7	9,950	2	2,000
TOTALS	648	543	6,003,950	105	118,092

TABLE III—NUMBER AND VALUE OF BUILDING PERMITS REPORTED FOR 1968

<i>Number of municipalities that answered questionnaire</i>	<i>Number of permits issued</i>	<i>Value of permits</i>
TOWNS 116	17,057	\$ 935,600
VILLAGES 91	2,574	\$ 103,600
TOWNSHIPS 395	33,572	\$ 385,133,000
CITIES 32	44,274	\$ 825,191,000
BOROUGHs 5	12,547	\$ 527,680,000
IMPROVEMENT DISTRICTS 9	129	\$ 1,162,500
TOTALS 648	110,153	\$1,740,205,700

TABLE IV—ANALYSIS OF DEMAND FOR TRAINING OF BUILDING INSPECTORS

<i>Municipalities</i>	<i>Number of municipalities that answered questionnaire</i>	<i>Is a training course desirable ?</i>		<i>Would inspector attend a course ?</i>		<i>Have you a building inspector ?</i>	
		<i>YES</i>	<i>NO</i>	<i>YES</i>	<i>NO</i>	<i>YES</i>	<i>NO</i>
TOWNS	116	96	11	80	17	108	9
VILLAGES	91	62	8	31	17	65	21
TOWNSHIPS	395	249	65	165	80	306	78
CITIES	32	31	1	31	1	32	0
BOROUGHs	5	5	0	5	0	5	0
IMPROVEMENT DISTRICTS	9	6	1	3	3	7	2
TOTALS	648	449	86	317	118	523	110

*Resident population only. Summer and winter resort population not calculated due to lack of information.

TABLE V—MUNICIPALITIES REPORTING ON SATISFACTORY PARTS OF N.B.C.

		<i>Satisfactory</i>	<i>Unsatisfactory</i>
Part I	Administration	175	44
Part III	Use and Occupancy	204	19
Part IV	Design Section	193	18
Part VI	Building Services	197	16
Part IX	Housing	192	22
Short Form of N.B.C.		191	15

PART 3—Comments from a Cross-Section of Municipalities

CITY OF TORONTO

I am returning herewith the completed questionnaire sent recently to the City Clerk re uniform building standards for Ontario. I wish to add the following comments and clarifications of my replies for your consideration:

1. *Question 3*

The Building By-law enacted a few months ago in this City incorporates the Toronto Area Building Code which in turn includes all the basic principles of the National Building Code and also includes many clauses verbatim from the National Building Code.

2. *Question 6*

Part 1 of the National Building Code needs to be completely re-written by a competent municipal solicitor with considerable court experience in enforcing municipal by-laws. Due cognizance must be taken of the enabling legislation available to the municipality. Some of the procedures recommended in Part 1 of the National Building Code, while needed to enforce a building by-law, are not legally enforceable in Ontario, e.g. requiring a permit for a change of occupancy, requiring an occupancy permit before a building can be occupied after erection or alterations and the revocation of a permit where work is not carried out in compliance with the requirements of the By-laws.

I do not recommend the adoption of Part 3 outright for the following reasons although I am in agreement with the principles incorporated in this Part:

1. Part 3 conflicts with existing provincial legislation, including *The Industrial Safety Act*, *The Regulations of the Ontario Fire Marshal* and *The Hotel Fire Safety Act*.
2. There is excessive use of terms such as 'good practice', 'approved' and 'acceptable to the authority having jurisdiction'. Our solicitors have advised that if there are ascertainable design characteristics to be taken

into consideration, these should be included in the code. Otherwise the more restrictive requirements should be included in the code and reliance placed on the administrative official's statutory discretion to relax. In addition some simple method must be evolved to allow the adoption of nationally recognized standards such as CSA or ASTM without the cumbersome procedures of writing them into the building code.

These foregoing remarks are equally applicable to all other sections of the National Building Code.

3. I am of the opinion that undue provision is made in Part 3 for combustible construction particularly in regard to the construction of assembly buildings, institutional buildings and residential buildings. This may be necessary in a rural municipality where better materials are not readily available and large buildings are not often required. However, in an area like Metropolitan Toronto, where buildings are being constantly expanded to meet the growing needs of the community, eventual fire hazards will be created if buildings of minimal fire endurance are permitted. In addition, I do not believe that combustible exterior walls should be permitted in any densely built metropolitan area.

I think that it is intolerable that a high rise building and its occupants could be endangered by an adjacent combustible building which will not contain a fire more than twenty minutes.

In general I agree with the principles incorporated in Part 4 of the NBC but I have listed this part as unsatisfactory for mainly minor reasons as follows:

Section 4-1 requires professional supervision of the construction of a building but this cannot now be required generally under existing Ontario legislation.

Loads due to earthquakes need not be taken into consideration in many areas.

Section 4.2 of the NBC makes provision for every type of soil or rock which may be encountered in Canada including permafrost conditions. In a local area like Toronto a few only of these types of soils and rocks are encountered and there is a wealth of local experience on how to safely handle these local conditions. Accordingly I would prefer to draft a local foundation section using the principles of the National Code but only insofar as they apply to the known local soil conditions.

I fully agree with the design principles incorporated in Section 4.3, Wood, Section 4.4, Masonry, Section 4.5, Concrete and Section 4.6, Steel. However, the use of such terms as 'good practice' in relation to materials and methods of construction makes them difficult to enforce. Also, in the interests of enforceability I would suggest a preamble before each of these sections prohibiting the use in buildings of materials or methods of construction or design contrary to the requirements of the Section.

The requirements of Part 6 Building Services of the NBC are partly covered in Ontario by the following acts or regulations:

The Energy Act

The Boilers and Pressure Vessels Act

The Air Pollution Control Act

The Fire Marshals Act

The Elevators and Lifts Act, and

*The Regulations of the Hydro Electrical Power
Commission of Ontario.*

Accordingly some adjustment to either Part 6 of the NBC or the above acts will be necessary when considering the adoption of Part 6.

Conflicts between Part 9, Housing and other Parts of the NBC would preclude the adoption of Part 9 but I understand that attempts are being made to eliminate these in the 1970 Code. In addition to this, I am concerned about the lack of, what are in my opinion, adequate fire safety measures for houses in the National Building Code. No fire endurance whatever is required for a house 4 feet or more from the lot line and any house may be lined on the inside with highly flammable materials. This concern is understandable when it is realized that approximately 300 persons die each year in fires in residential buildings in Canada, according to figures compiled by the Dominion Fire Commissioner, and a large proportion of these deaths could probably be attributed to inferior construction and materials which burn rapidly.

3. General Comments

(1) A major problem with fires in modern buildings, particularly high-rise, involves the rapid spread of smoke and other products of combustion from relatively small fires, through air conditioning and other duct systems, to all parts of the building. I would strongly recommend that your Committee keep this problem in mind when you draft your recommendations. Under the present *Planning Act* separate permits may be required for heating systems. Perhaps this concept should be extended to cover all mechanical equipment including air-conditioning and refrigeration since they are all part of the one trade.

(2) Your Committee should consider ways and means of providing for the approvals of materials and of disseminating the information to all enforcement agencies for building regulations. There is no point in providing for uniform building regulations if they are to be interpreted differently by the various agencies involved.

(3) In reviewing Section 31 of *The Planning Act*, emphasis should be placed on occupancies rather than on buildings. The trend nowadays is towards multi-occupancy building complexes and, in recognition of this, modern building codes tend to emphasize occupancies rather than buildings, regulating the type of occupancy combinations that can be permitted, the degree of fire separation required between occupancies and the varying degrees of fire endurance needed to accommodate the different occupancies.

CITY OF OTTAWA

with reply from Associate Committee on the National Building Code

The Planning Act of Ontario under section 31 (1) 22 gives the local municipality power to pass by-laws adopting with such changes as the council may consider necessary by including in the by-law in whole or in part the National Building Code of Canada.

The City of Ottawa has adopted the 1965 edition of the National Building Code of Canada including all corrections and revisions to December 1967, subject to certain additions, deletions and changes as set forth in the by-law. The purpose of these changes from the NBCC-1965 is to adapt the code for use in the City of Ottawa.

In general, it can be stated that the City of Ottawa has established higher standards for buildings constructed in Ottawa than the minimum standards of NBCC-1965 established for say Carbonear, Newfoundland or Trail, B.C. As an example, we require non-combustible construction with a fire resistance rating for:

- (a) schools accommodating more than 20 pupils or a building where the total floor area used for school purposes exceeds 800 square feet.
- (b) a building used for purposes of caring for or supervising more than 20 persons who, due to age, health, disability or detention are unable to assume responsibility for their own safety or when the total floor area set aside for these uses exceeds 2000 square feet or where the building exceeds two stories in height.
- (c) a repair garage or a storage garage.
- (d) a building classified in sub-section 3.1.2 of NBCC-1965 under the heading 'Group C Building Residential Occupancy, Division 1'.

These requirements have been in use in Ottawa for over 30 years and we would not like to see the safety barriers lowered for these classes of occupancy.

In other sections of the by-law, for example, we detail the requirements for height and subdivision of balustrades for different occupancies. We consider this a very important aspect of building safety and have detailed requirements which are not covered adequately in NBCC-1965.

We also require submission and approval of plans for shoring and underpinning of excavations, falsework support, shop drawings for precast elements, and a minimum of one site visit report per floor for high-rise construction. In our by-law, we detail earthquake requirements for buildings not covered in the code, as well as fire protection requirements which we have found are suitable for the City of Ottawa.

We feel that the National Building Code as it is presently set up is not acceptable for use in the City of Ottawa unless its adoption is modified to meet local conditions.

It should be pointed out that when the decision is made to revise the building by-law (every two years) a committee of observers and advisers set up on the changes and revisions prior to submission of the amended by-law to Board of Control and City Council. The Professional Engineers Association of Ontario, the Ontario Association of Architects and the Ottawa Construction Association are represented on the Building By-law Review Committee. The final draft by-law submitted for approval, in most cases, represents the unanimous approval of this review committee.

With respect to the earthquake provisions of the by-law, an earthquake committee consisting of the leading architects and structural engineers in the Ottawa area, together with representatives of the National Research Council and civic technical personnel meet on a continuing basis to recommend minimum standards for earthquake design which are not included in the 1965 edition of NBCC. These requirements shown as Appendix 'A' to our by-law are essential to the safety of occupants of buildings and must be detailed in our by-law if we are to advise designers or our requirements and approve plans subsequently submitted to us for approval.

We are not satisfied to leave this very important aspect of building design up to each engineer, for instance, as to whether or not he incorporates minimum reinforcing or a ductile moment-resisting frame in a high-rise structure. If we are to enforce the code equitably across the city, all citizens have the right to expect buildings constructed under our code to be equally safe for their use in the event that an earthquake takes place.

We appreciate the assistance and interest afforded our committee by the National Research Council and we are sure that they will be able to expand and enlarge on their present earthquake requirements in future code revisions. In the meantime, until the science of earthquake engineering is codified in detail, we feel we have the responsibility to ensure that the safety of buildings constructed in Ottawa reflects the most up-to-date knowledge and regulations for seismic loading and that until more specific detail is provided in N.B.C.C. we must utilize appropriate material from other sources in our by-law.

We are enclosing a copy of our latest building by-law No. 12-69 which was approved for use on January 20th, 1969. This by-law which adopts NBCC-1965 details all additions, deletions and changes to the National Building Code as well as a complete chapter 1 on administration.

We trust you realize that it is not possible to cover the reasons for all the additions, deletions and changes to the N.B.C.C. in this type of reply but you can have our assurance that serious consideration was given to each of the changes, etc., by experienced, competent, professional personnel before they were enacted in by-law form. Besides the professional assistance provided by our sub-committees, the Building Inspection Branch has a staff in excess of fifty persons, including professional engineers and architects.

Please feel free to request the reasons for any particular change in our building by-law 12-69 with the minimum requirements of the National Building Code.

EXCERPTS FROM LETTER OF REPLY, DATED 16/7/69

Since the staff of the Division of Building Research of the National Research Council who serve this Associate Committee in a technical and secretarial capacity enjoy such close and cordial liaison with Mr. C. Maxwell Taylor, Building Inspector for the City of Ottawa, and members of his staff, we are a little at a loss to appreciate some of the more unusual comments in your letter to Mr. Carruthers.

Together with these colleagues, I was delighted when the City of Ottawa adopted the 1965 edition of the National Building Code for its use. We knew of the amendments that had to be made but I know that my colleagues have been submitting to the appropriate committees quite a number of suggestions from Mr. Taylor and his staff so that these constructive ideas from the City of Ottawa might be considered in the preparation of the fifth edition of the code which is due to appear in January, 1970.

It is, therefore, hardly necessary for me to comment in detail on the "higher standards" adopted by the City of Ottawa since I have every reason to hope that all these points have been or are being considered by the appropriate committees for the 1970 edition.

Accordingly, we trust that the amendments made to the Code for the new edition will be completely acceptable by the City of Ottawa.

Perhaps I could helpfully comment specifically on your concluding paragraphs on page 2 with regard to earthquake design. Mr. Maxwell Taylor knows well that this matter has been under most careful study by the leading experts in this field in Canada with consultation in the United States. I can, therefore, assure you that every effort is being made to make the earthquake provisions in the 1970 Code such that they should be completely acceptable for use in the city of Ottawa.

The only thing that really puzzles me about your letter is reference to Carbonear, Newfoundland, and Trail, B.C. I would be most grateful and it would be most helpful to us if you could tell me the exact significance of the reference to these two cities in relation to the needs of the city of Ottawa and the National Building Code of Canada.

CITY OF KITCHENER

with reply from Associate Committee on the National Building Code

After four years, using the 1965 edition of the National Building Code as our building by-law, the writer still objects to Part 3 'Use and Occupancy' in its present form. Like so many others, who in discussions have expressed our own feelings that it is very difficult to interpret and often so very ambiguous and difficult to apply. Also, from conferences we can appreciate that in the 1970 Code every effort will be made to overcome these objections, so that our objections may be only of a transitory nature. We enclose for your perusal, a copy of our building by-law, to which I shall refer shortly.

If, as has been suggested, the code is adopted as a provincial statute applicable to each municipality and without amendments, we shall object

strenuously unless some action is taken on the following, which we have adopted as amendments.

1. Minimum fire ratings of all habitable rooms.
2. Additional requirements added to fire protection equipment. This was adopted as a result of meetings with all the fire chiefs in the county.
3. Additional requirements to open-air parking garages.
4. We respectfully recommend those requirements to underground parking garages which Toronto has and which we have adopted.

It is our feeling that consideration be given to requiring sprinklering of certain types of occupancies after a certain floor area has been reached.

We meet so often, the blatant example of additions to lumber storage yards located in residential areas (no early planning) and despite the great hazard, we cannot force them to be sprinklered.

We also express some concern over some of the diminishing requirements as set forth in the recently received 1968 revisions to the Residential Standards. We hope this is not a trend, for we find the code very minimal as it is.

EXCERPTS FROM LETTER OF REPLY, DATED 9/7/69

You are quite correct in stating that the Associate Committee is making every possible effort to meet such objections as you mentioned in the 1970 Code. We therefore hope that you will find the fifth edition, when it appears, much easier to use and so more helpful to you.

We are preparing a special commentary on Part 3 which will explain in detail how this most important Part can and should be used.

Your comments with regard to fire provisions will be given most careful consideration. The matter of requirements for garages has been under study. The new edition will be an improvement but there is still need for research before we can provide complete regulations for these important types of buildings.

With reference to the Residential Standards, will you please recall that these are *minimum* standards that are consistent with public safety. You may be quite certain that no reduction will ever be provided unless it has been proved beyond all doubt to be quite safe and appropriate. We all hope that most residences in Canada will be built to standards that are rather better than the minima set out in the National Building Code and its associated documents.

BOROUGH OF NORTH YORK

The Borough of North York strongly supports the principle of Uniform Building Regulations. To this end, its officials have actively participated for several years in the activities of the Toronto Area Building Code Committee, which is an independent Committee formed for the express purpose of compiling a Building Code which could be enacted by each Municipality in Metropolitan Toronto as its Building By-law. In formulating the Toronto

Area Building Code, the Committee used the National Building Code of Canada as a basis, and made only such changes as it considered essential for a large closely built-up urban centre such as Metropolitan Toronto. North York enacted the Toronto Area Building Code as its Building By-law in April 1968, and has been actively applying it to all building construction since that time.

While supporting the principle of Uniform Building Standards for the Province of Ontario, North York is strongly opposed to the mandatory adoption of the 1965 National Building Code of Canada for this purpose. This document presently contains many deficiencies which render it unacceptable to this Municipality, the most serious of which may be briefly summarized as follows:

1. The fire protection standards contained in the Code for many types of buildings are considered to be too low for a large urban centre, and are in fact considerably below those which have been required for several years, and have become standard practice in the area. For example, the N.B.C. permits three storey apartment buildings up to 9,000 sq. ft., per floor in wood construction, whereas the Toronto Area Code requires all such buildings containing more than 6 suites to be of fire-resistive construction. The N.B.C. also permits small hospitals and theatres to be in wood construction, whereas the Toronto Area Code requires all such buildings to be of fire-resistive construction. In house construction, the N.B.C. permits walls 4 feet or more from a property line, which is a minimum in North York, to be constructed of wood frame construction with no fire-resistance rating. Furthermore, the N.B.C. permits all walls, partitions, and ceilings of houses to be covered with highly combustible materials in lieu of lath and plaster of gypsum board, which have been required in all parts of Metro Toronto for many years for fire protection. In the case of row housing, the N.B.C. does not make satisfactory provision for effective fire walls between adjacent dwelling units.
2. Another major shortcoming of the National Building Code is that it would not constitute a legally enforceable By-law even if it were adopted. The reason for this is particularly evident in Part 9 Housing, which contains few actual mandatory regulations, but rather sets out that the 'requirements' shall be in accordance with 'good practice', and goes on to say that the requirements outlined in the Residential Standards Supplement No. 5 to the N.B.C. shall be used as a guide to good practice. It is, therefore, clear that none of the requirements contained in the Residential Standards would become mandatory By-law requirements, but simply requirements to be used by a Building Official as a guide to good practice. As a result, the requirements could not be enforced and the Code is meaningless as a legal document. The same deficiency is evident in Part 3 Use and Occupancy, which refers to many industry standards and states they may be used as a guide to good practice. Even the technical chapters such as Plain, Reinforced and Prestressed Concrete, which are otherwise satisfactory, are worded as design manuals and not legally enforceable By-laws.

3. It is the opinion of most experienced Municipal Solicitors that a Municipality could only adopt those portions of the National Building Code for which there is a statutory authority in Ontario. The N.B.C. contains many clauses in many chapters for which there is no such authority, such as requirements dealing with lighting, insulation, acoustical treatments, damp-proofing and water-proofing, required plumbing fixtures, etc. This comment may be more a reflection upon the inadequacies of *The Planning Act* and *The Municipal Act* than it is on the National Building Code, but nevertheless this situation has proven to be a formidable obstacle in the way of the adoption of the N.B.C.
4. At least three major sections of the National Building Code are already regulated in their entirety by Provincial Legislation in Ontario viz: the Plumbing Regulations under *The Ontario Water Resources Commission Act*, *The Construction Safety Act*, and the Electrical Regulations of the Hydro Electric Power Commission of Ontario.

Furthermore, many miscellaneous requirements of the N.B.C. are regulated by Ontario legislation and must either be omitted from Municipal Building By-laws or amended to conform with the Provincial Regulations. Ontario legislation which conflicts or overlaps with National Building Code requirements includes *The Ontario Energy Act*, *Boilers and Pressure Vessels Act*, *Elevators and Lifts Act*, *Fire Marshals Act*, *Egress from Public Buildings Act*, *The Theatres Act*, *The Hotel Fire Safety Act*, *The Industrial Safety Act*, *The Tourist Establishment Act*, and many others which your Committee has no doubt fully documented, most of which contain actual building regulations relating to specific buildings.

The Provincial Acts, Regulations and Standards, most of which are administered by Provincial bodies, require the submission of drawings for approval of certain aspects of proposed building construction. When such approval is granted, it is frequently misunderstood to mean that the entire building has been found to comply in all respects with generally accepted Building and Fire Codes. When drawings are subsequently submitted to the Municipality for detailed examination for compliance with a complete Building Code, the drawings frequently do not conform with either the Municipal Building Code, or the present National Building Code. In many instances, the requirements of the Provincial Authority are more restrictive, and ultimately more costly than required by municipal regulations.

In either case, the confusion which results leads to a lack of respect for, and support of adequate building regulations by the design professions and the construction industry.

5. Part 9 Housing of the N.B.C. and its Supplement, Residential Standards, apparently were prepared primarily for use by Central Mortgage and Housing Corporation in the administration of lending under the *National Housing Act*, and accordingly contain many regulations which cannot and should not be included in the Building By-law. For the same reason, it contains regulations dealing with small apartment buildings which are also contained in Part 3 Use and Occupancy. However,

because of poor wording in Part 1 Administration, the apartment house regulations contained in Part 3 Use and Occupancy Code contains no apartment building regulations other than those relating to minor buildings in Part 9 Housing.

6. The National Building Code is a highly complex document, capable of being understood and applied by only the most experienced officials, and far beyond the understanding of the vast majority of smaller municipalities. There is a need, therefore, for the compilation of a comprehensive abridged or short form Building Code for use by the smaller municipalities or rural areas, which could be readily understood by their officials, and would be adequate to regulate the type of building construction which is likely to be undertaken in such areas.

The foregoing comments represent a brief synopsis only of the major deficiencies of the 1965 National Building Code of Canada, and it is not intended to burden this submission with full and complete details of all such deficiencies. However, they are presented in sufficient detail to illustrate why this Municipality did not and could not adopt the 1965 N.B.C., without amendment, as its Building By-law. It may well be that the 1970 edition of the N.B.C. will correct most or all of these shortcomings; on the other hand, the 1970 version may introduce a whole new set of problems, and this will not be known until the Code is published. The N.B.C. was designed for application all across this country, and while its adoption might be a great step forward for many smaller municipalities with inadequate Building Codes, for the major urban centres which have spent many years upgrading their Building Codes based on experience with a view to preventing fire spread and reducing loss of life, its adoption would be a retrograde step.

North York agrees that there should be a Uniform Building Code for the Province of Ontario, administered by the municipalities. This code should be based upon the 1970 National Building Code of Canada, with such amendments as may be required to upgrade its fire protection standards and design requirements to at least the level of those contained in the Toronto Area Building Code, and to render the code a legally enforceable By-law in the Province of Ontario. It is considered essential that procedures be established to enable the municipalities to have representation on the Committee or Committees established to prepare such a Provincial Building Code.

Obviously, a major problem confronting your Committee is the multiplicity of Provincial Legislation containing requirements relating to building and fire safety, such as that listed previously. It is suggested that consideration be given to the following steps:

1. *The Construction Safety Act*, *The Ontario Water Resources Commission Act* and the Plumbing Regulations thereunder, and the Electrical Regulations of the H.E.P.C., together with their existing administrative arrangements, would be left unchanged.
2. Section 31 of *The Planning Act* and all sections of *The Municipal Act* dealing with building and fire protection standards would be repealed.

3. A new Act could be prepared, entitled 'Building Safety Act', or something similar, together with regulations thereunder which would contain all building and fire safety requirements. The Act and the Regulations would be administered and enforced by the municipalities, and would also be binding on all Provincial Departments. An abridged version would be prepared for the smaller municipalities. The Act would provide for minimum qualifications of Building Officials and Inspectors, and possibly for an Appeal Board for Uniform Code interpretation.
4. Amend the many Provincial Acts containing regulations relating to building and fire safety such as those previously noted by deleting all the building and fire regulations.
5. Eliminate the necessity for architects or builders to have their plans approved by various Provincial Departments as well as Municipal Building Departments. At the present time, architects must frequently submit their plans to the Department of Labour, the Ontario Fire Marshal, the Liquor License Board, Department of Highways, Department of Information and Tourism, and various other Provincial Departments before the Municipal Department can issue a building permit.

If the goal of one set of building regulations for the Province is achieved, approval of the plans by the Municipal Building Department should be sufficient. With the prospect of regional government, and larger units of administration, most municipalities will be able to employ competent staff to administer the Building Code.
6. A Provincial Building Department or Building Code authority should be established to be responsible for the preparation of the Code, for keeping it up to date at all times, for approving new materials and construction techniques, and related matters. Such authority could also be responsible for establishing a training course for Building Inspectors, and for generally assisting Municipal Building Officials in applying the Code.

CITY OF WINDSOR

We are wholly in accord with the introduction of a uniform Building Code for the Province of Ontario, but we feel very little success will come about through a new code unless it is properly enforced. This in turn can only be accomplished through adequately trained enforcement officers and we would solicit the committee's whole-hearted support in recommending adequate provisions be made for the training of enforcement officers. We also feel that unless this code is made uniform, to the extent that all provincial government agencies adopt the same code, we will continue to have the same bureaucratic approach to building by-law enforcement. We mean specifically, the Department of Labour, Fire Marshal's Office, re hospital and school construction, Hotel Fire Safety Regulations, Tourist Establishment Act Regulations, Liquor Control Board Regulations and there may be others.

Each of these agencies, it would appear, are concerned about similar problems namely, structural sufficiency, fire protection and health. It is

our feeling that if all agencies and local building departments use these same regulations, then developers could proceed with their plans with the least amount of red tape. We carried out a study of such overlapping and duplication in 1966 and, at that time, found that a typical development required clearances and/or permits for thirty agencies, Federal, Provincial and Municipal.

One other aspect the committee may consider looking into would be the safety regulations while not necessarily building, the structures involved in the setting up of a midway or amusement ride complex. As many of these amusement rides are portable and move from city to city, it is difficult to control them.

While there is legislation available in *The Municipal Act* for a municipality to inspect such rides, it would seem the logical agency to control and inspect for safety regulations should be a provincial agency who would make an initial inspection early in the spring and periodic inspections throughout the season.

CITY OF WATERLOO

I would welcome a Provincial Building Code that would be prepared by using the current National Building Code as a basis or guide, giving consideration to recommended changes, or proposals by various municipal associations. A training course would be desirable and most beneficial so that uniform interpretation and enforcement of a uniform code could be achieved.

CITY OF ST. CATHARINES

(a) *Part '1'—Administration*

It was our opinion that Part '1' as prepared was not satisfactory. We found that it was necessary to rewrite the Administration Section to suit local conditions and include other requirements such as regulations for moving of buildings, work on public property and dangerous buildings, excavations, etc.

(b) *Part '3'—Use and Occupancy*

Part '3' has generally proved to be satisfactory, however, through its application we have found it necessary to advise certain members of the Part '3' Committee of its inadequacies and trust that they will give these matters their consideration in preparing the 1970 edition of the code.

(c) *Part '4'—Design Section*

Part '4' is generally satisfactory. Some problems have been encountered, such as article 4.1.1.5. due to present provincial legislation not permitting the enforcement of such requirements unless in the case of public buildings.

Another example is the provision of article 4.1.3.4. which we feel is possibly too stringent when applied to private balcony railings. It

is hoped that a more widespread adoption of the code in the future will bring matters of this nature into the open and, through the influence of participating building officials, the associate committee on the National Building Code will accept suggestions to make revisions more readily.

(d) *Part '6'—Building Services*

Generally satisfactory.

(e) *Part '9'—Housing*

Part '9' is probably the most used section of the National Building Code due to the large percentage of residential construction being carried out today. We realize that Part '9' was meant to be a performance code, but cannot agree that this is correct when reference must be made to one specification code, namely, supplement No. 5.

It would be our recommendation that Part '9' include all those requirements enforceable by a municipality which are presently in heavy type in supplement No. 5.

CITY OF HAMILTON

with reply from Associate Committee on the National Building Code

The following are some of the differences which exist between provincial regulations and the City of Hamilton building by-law, with respect to fire safety regulations.

Nursing Homes

1. *Sprinkler Systems*

Provincial regulations require sprinkler systems to be installed only in homes of combustible construction in a municipality that does not have public fire protection.

Municipal by-law requires sprinkler systems in all homes of other than fire-proof construction by the first day of January, 1970.

2. *Exterior Stairs*

Provincial regulations permit exterior stairs only to the second floor. Municipal by-law permits exterior stairs to the third floor.

3. *Standpipes*

Provincial regulations do not mention standpipes.

Municipal by-law requires standpipes in homes of three stories or more.

4. *Interior Finishes*

The provincial regulations regarding interior finishes would seem to contradict itself in that Para (1) states that no wood or vegetable fibre board shall be used as an interior finish in a nursing home while Para (2) states that all combustible finishes on the walls and ceilings in a nursing home shall be treated with a fire retardant surface coating.

5. *Automatic Fire Alarm Systems*

Provincial regulations require a fire alarm system in every nursing home.

Municipal by-law requires a fire alarm system only when deemed necessary by the Chief Fire Prevention Officer.

Spray Booths

1. *Flammable Liquid Rates*

Department of Labour refers to low flash point liquids as having below 105 F.

The Gas Handling Act refers to Class 1 liquids as below 73 F.

Municipal by-law refers to low flash point liquids as having below 110 F.

2. *Sprinkler Systems*

Department of Labour requires a sprinkler system in an open-faced spray booth if it is in excess of nine square feet.

Municipal regulations require that unless the spray area is totally enclosed it must be sprinklered.

3. *Ventilation*

Department of Labour requires exhaust intake to be three feet above floor level.

Municipal by-law permits intake two feet above floor level.

Garages

1. *Heating Units*

Department of Labour requires stoves etc. to be a minimum of 4 feet 6 inches above floor level.

Municipal regulations require stoves etc. to be a minimum of 2 feet above floor level.

Flammable Liquid Bulk Storage Tanks (Underground)

1. *Spacing*

Gasoline Handling Code permits tanks to be within 2 feet of each other.

Municipal regulations require a 3 foot spacing between tanks.

Flammable Liquid Bulk Storage Tanks (Above ground)

1. *Identification*

Gasoline Handling Code requires above ground tanks to be marked with 3 inch letters.

Municipal regulations require 12 inch lettering.

2. *General*

There are a number of differences between the Department of Labour requirements and the municipal regulations in the following areas:

- (a) the general requirements for means of egress, and the distance of travel to the nearest exit.
- (b) emergency lighting.
- (c) fire alarm systems.

Hotels

1. *Alarm systems*

The Hotel Fire Safety Act requires an automatic fire alarm system for all hotels.

Municipal regulations require an alarm system only in a building in excess of 4 stories.

2. *Emergency Lighting*

The Hotel Fire Safety Act contains no requirements for emergency lighting.

Municipal regulations require emergency lighting for means of egress for the following occupancies:

- (a) a residence building of 4 stories or higher.
- (b) a place of assembly at a height of 2 stories or more having a capacity of 300 or more persons.
- (c) a building of a height of more than 2 stories if the required stairway is not provided with natural light.

3. *Exit Lights*

The Hotel Fire Safety Act requires that exit signs or lights have the word 'Exit' displayed in block letters no less than 6 inches in height.

Municipal regulations does not specify the size or type of lettering on exit signs.

The foregoing is only a few examples of differences between Provincial Regulations and our municipal by-law. I am sure that a thorough study of all regulations would reveal many more inconsistencies between the various requirements.

As we are all striving to obtain the same objective, I am sure that the differences which exist between the various regulations could be settled through meetings of the various departments, discussing the problems and arriving at a decision which would be acceptable to all levels of Government. This would, I am sure, provide for better liaison and co-operation between the inspectors from all departments, and would be of great benefit to the architects, contractors, and all tradesmen involved in construction of buildings and installation of services.

Although I feel confident that through discussions a regulation could be developed which would be acceptable to the province and municipality with regard to new construction or installations, I do not feel that this is the greatest problem which an inspector who is required to enforce fire safety regulations is faced with. It is the existing buildings, many of which are from 50-100 years old, and have been occupied in the same manner for many years, which presents the greatest problem to the fire inspector.

In this area I feel that our municipal regulations make provision for this type of building whereas provincial regulations do not. The following

is an extract from *City of Hamilton Building Regulations by-law #4797*:

100A DUTIES AND POWERS OF CHIEF FIRE PREVENTION OFFICER

1. Under the general supervision and control of the 'chief of the fire department', it shall be the duty of the 'chief fire prevention officer', and he shall have power.

2.(A) with respect to existing 'buildings', 'structures' and premises, to issue orders for the abatement of unsafe conditions as regards danger from fire, as more fully set forth in sections 100A, 400A and F1500 of this by-law, and in so doing, to order, wherever necessary for the abatement of such unsafe conditions in such 'buildings', 'structures' and premises compliance with any of those requirements of articles XIII or XIV which primarily relate to the regulation of fire hazards in new construction, installation and 'alteration', or with any other requirements of this by-law as primarily related to the regulations of fire hazards in new construction, installation and 'alteration', to such an extent as, in the opinion of the 'chief fire prevention officer', may be both practicable and necessary or advisable. (6779/51, s. 1).

I believe that the key of this Para., in dealing with existing buildings is "or with any other requirements of this by-law as primarily related to the regulation of fire hazards in new construction, installation and alteration to such an extent as, in the opinion of the Chief Fire Prevention Officer, may both be '*practicable and necessary or advisable*'."

This provision in the by-law permits this department to use common sense and discretion when dealing with an existing building where it would not be practical or possible to demand requirements as for a new building.

The provincial regulations do not appear to make any provision for an inspector to use any discretion when making requirements, and therefore he must order changes to comply with the regulations although in some instances he realizes it is not practical if not impossible.

I would also point out that when an inspector from this Department has issued an order he is required to see that the work is completed within a reasonable time or proceed with court action. There have been many instances where the Provincial Inspector has issued an order which is more stringent than ours but the work is not completed nor does there appear to be any action taken against the person on whom the order was issued.

It would seem that there is little point in having a regulation with no provision in it for using some discretion when dealing with existing buildings if the regulation cannot or is not enforced.

During the past two years this Department has inspected approximately 60 hotels and of that number approximately 48 have complied with the requirements of this department. Although our requirements do not comply with all sections of *The Hotel Fire Safety Act*, there were many major changes and alterations ordered which involved a substantial cost to the owners. These requirements were based on what was considered reason-

able, practical and necessary in the particular buildings that were being dealt with.

There have been instances in the hotels where an inspector from the L.L.B.O. had ordered changes in a building which, in fact, did comply with *The Hotel Fire Safety Act*, but provided very little, if any, additional protection for the occupants of the building.

Once again not only do I feel that this would benefit the inspectors who are carrying out the inspections, but most important create better public relations with the citizens who are now faced with a situation that after complying with the requirements of one department find that there are further requirements from another department. It makes it very difficult for the provincial or municipal authorities to convince these people that what we are asking them to do is necessary when they know that we are both doing the same job but cannot agree even amongst ourselves as to what is required.

EXCERPTS FROM LETTER OF REPLY, DATED 11/7/69

Your review of the slight differences between provincial regulations, municipal regulations and the National Building Code in Nursing Homes, Spray Booths, Garages and other occupancies shows what great trouble you have gone to in making this comparison. Your comments will be given the most careful consideration by the members of the staff of DBR/NRC who advise the Associate Committee on the National Building Code and the Associate Committee on the National Fire Code since the matters you deal with really are spread between the two Codes.

It was most encouraging to read your opinion that such differences should be resolved since we are all striving for the same objective, as you state in your letter. I do hope that you will find the 1970 edition of the National Building Code and the National Fire Code will go a long way to dealing with some of the differences which you describe.

It would be inappropriate for me to make any detailed comments of your thoughtful discussion of some of the problems that you meet especially in your inspection of existing buildings. As you know, the National Building Code is designed to deal with the design and construction of new buildings but the problem of old buildings still remains. Please be assured that your letter is going to be most helpful to those who are working so hard to make the National Building Code and the National Fire Code even more useful than they are at present in the national service.

BRANTFORD TOWNSHIP

with reply from Associate Committee on the National Building Code

This will acknowledge the communication from A. F. Telfer, Secretary to your Committee on Uniform Building Standards, dated February 25th, with respect to the question of administration of the National Building Code. The reason the administration is marked as unsatisfactory arises from the discussions that we have held with our own Building Inspector and the problems that have arisen from time to time.

During the years of 1945, 1946 and part of 1947, we spent considerable time endeavouring to adopt National Building Code as it was at that time, and you are, no doubt, well acquainted with the fact that there was always the question of whether the municipality could adopt the National Building Code in its entirety as a by-law.

Since that time a great deal of the powers of the council have been eroded, or should we say transferred over to *The Planning Act* in respect to building by-laws and regulations and control by-laws governing housing standards.

Likewise, we find new authorities and new powers transferred under *The Health Act* to Health Units established under County Health Units. Such regulations likewise are continually changing. The Municipal Council has less and less understanding and less and less power in respect to legislation, or the enactment of by-laws, due to fragmentation of central authority.

What it all boils down to, is simply that all bodies are endeavouring to establish by their various ways and means to have minimum standards. This has contributed to a great deal of confusion as to why in the building of an ordinary residence it requires seven or eight inspectors making one or more inspections. A list of those that come to mind at the present time are:

- (1) The Building Inspector
- (2) The Sanitary Inspector
- (3) The Trench Inspector
- (4) The Safety Inspector
- (5) The Plumbing Inspector
- (6) The Fire Inspector
- (7) The Electrical Inspector
- (8) The Drainage Inspector

There are, no doubt, others that I have missed.

It was for this reason that we questioned the Administrative Section as unsatisfactory.

It was our belief at that time, and on subsequent occasions, that the amendments of the National Building Code and its supplementary additions, in respect to housing standards, fire resistance ratings, and use of occupancy, etc., were subject to continuous revisions and that the municipality should pass a by-law to provide for regulations concerning construction of buildings, the adoption of the National Building Code of Canada and the amendments thereto, for determining material strength, permissible stresses, dimensions, quality materials and all factors coming under the building inspection jurisdiction in respect to buildings.

The general clause that was adopted by Committee and Council in 1946 is quoted as follows:

“The Inspector shall give consideration to the character of the building, and the use for which the erection is intended and if, when

examining the plans or during the erection of any building the Inspector finds that certain material strength, permissible stresses, dimensions, quality of materials, safety factors and health hazards or any other points are not covered or clearly defined in this by-law, then the Inspector is hereby authorized to insist that the construction of the said building in respect to the terms not fully covered or defined shall be carried out in accordance with the recognized building and construction practices as contained in the National Building Code of Canada, as amended."

The legality of this clause has been questioned, but no case has been lost by reason of this section.

We believe that your Organization could do much in having the amendment to *The Municipal Act* provide rights of a Municipal Council to so adopt the National Building Code of Canada, and its regulations and amendments within a general building by-law.

It is because of the jurisdiction of the various Inspectors as set out above, many of whom are not under the jurisdiction of the local Municipal Council, that complicates the problem of any general, overall administration.

I have not personally reviewed the situation in the last four to five years, but gather it has not reached the point where consolidation of authority can yet take place for administrative purposes, and therefore, will no doubt, be some years before local government can be so altered to be able to consolidate a proper enactment by-law under a single authority for the area concerned.

EXCERPTS FROM LETTER OF REPLY, DATED 9/7/69

Your letter suggests that one reason why you found the National Building Code unsatisfactory is the possibility of some question regarding its adoption under your *Planning Act*. We believe that this objection has no foundation since most of the larger municipalities in Ontario have already adopted the Code for local use without difficulty.

Most of the other points in your letter relate to provincial jurisdiction over matters other than those covered in the National Building Code, or with matters that are covered by the Code with appropriate reference to provincial legislation. I am sure you will realize that this cannot possibly be any reason why the Code itself is unsatisfactory but rather the legal situation in the province of Ontario which is the subject of study by the Special Committee.

With reference to the third paragraph on page two of your letter and to the general clause adopted by your Council in 1946, I feel confident that you will find that, legally, it is imperative to give the date of any document upon which regulations are to be based. The National Building Code is kept constantly under review and revision slips are issued from time to time. These, however, are generally for guidance and cannot be regarded as legal until appropriately enacted.

The other points in your letter come under the purview of the Special Committee. May I therefore express the hope that you will find its report helpful to you when it is published.

CITY OF SARNIA

with reply from Associate Committee on the National Building Code

The City of Sarnia adopted the National Building Code in 1956 and it has been in effect since that date. Our answer to your questionnaire may have implied our dissatisfaction with the Code in sections (a) and (f) of the questionnaire. This is not actually the case. We would like to see an improvement in the section on Administration covering the following points:

1. There is no authority for the inspector to order removed any building erected or placed without permit.
2. We would choose to have a direct reference to an excavation so that no ground is broken until a permit is issued. We would also choose to have the owner made responsible for securing information regarding sewer and water availability and size before ground is broken. When he gets to us for a permit, often we find the depth of the excavation too low to drain to the city sewer.

In number 6 of the questionnaire, it asks what section is unsatisfactory for *our use*. The short form code is not suitable to us.

EXCERPTS FROM LETTER OF REPLY, DATED 8/7/69

- (1) Your comment about authority for the inspector being able to order a building removed is an important one and we shall see if this can be included in the revised Part 1 in the fifth edition.
- (2) The more detailed suggestions about breaking ground, etc., are most useful. Will you please be assured that we shall see if we can incorporate these ideas also in the new edition.
- (3) The Short Form was naturally prepared for the use of municipalities much smaller than the City of Sarnia and we are not, therefore, surprised that you do not find it useful. I do hope, however, that you will find the new Short Form (1970) of real use for small builders in your municipality since it will be identical with the new Part 9 of the Code and much more convenient to use.

CITY OF VANIER

with reply from Associate Committee on the National Building Code

The objection with the National Building Code is the earthquake provision. Several meetings and discussions were held with many technical persons knowledgeable in the matter and they all felt that the Ottawa area should be zoned as 2 because although it is in a high intensity earthquake area, the probability of occurrence is not that high. This is the only objection. We have adopted the National Building Code with this particular cut-back and our own administrative section. If the original comments led to believe that dissatisfaction was general, this was not the intention.

EXCERPTS FROM LETTER OF REPLY, DATED 8/7/69

Naturally I was very pleased to see your letter and to know that the City of Vanier is using the National Building Code with the exception of the Administrative Part and earthquake loads. We intended that Part 1 be re-written for local use whenever necessary.

As you imagine, the whole problem of earthquake loads has been under most careful review especially in the light of comments received from the Ottawa-Carleton area. I have every reason to believe that you will find the earthquake requirements that are included in the fifth edition of the Code which is to be published in January, 1970, in accord with your wishes.

Veuillez agréer, Cher Monsieur Dugas, l'expression de mes sentiments distingués.

CITY OF FORT WILLIAM

with reply from Associate Committee on the National Building Code

Your letter dated February 25th, 1969, addressed to the Municipal Clerk D. B. Morris has been assigned to me for reference and reply regarding reasons for the answers given to question #6 of your questionnaire dated January 3rd, 1969.

Firstly, my reasons for calling Part 1 Administration unsatisfactory were not directed at the Code itself as written and used as a reference manual, but rather when it becomes a piece of legislation as a local by-law or Provincial legislation.

I feel then that since Part 2 Definitions—Authority having jurisdiction names the building inspector as having jurisdiction in the regulation of buildings, this regulation should be further defined as to the scope of the jurisdiction of the building inspector which now implies the building inspector has control of the whole building until all work is completed. And, further that a broad scope of this jurisdiction along with the scope of other authorities having jurisdiction should be included in Part 1 Administration.

Secondly, with reference to Part 9 Housing, to be effective it is felt that supplement 5 should be mandatory and included in this part and not merely made reference to as suggested in Subsection 9.2.1 of Part 9.

EXCERPTS FROM LETTER OF REPLY, DATED 9/7/69

Part 1—We quite understand your objections to Part 1 but you will find it is quite clearly explained that the Associate Committee expects Part 1 to be revised appropriately for local use.

Part 2—Your comment with regard to the jurisdiction of the Building Inspector is greatly appreciated. It will be taken under advisement during the revision of the wording of Part 1 and Part 2 for the 1970 edition.

Part 9—You will not be surprised to know that we have had many comments about Part 9 since the use of it in association with Supplement No.

5 has not been clearly understood. In the fifth edition, to appear in January 1970, you will find that we have gone back to making Part 9 mandatory and with complete details so that I hope you will find it quite satisfactory in its new form.

CITY OF BARRIE

with reply from Associate Committee on the National Building Code

In reply to your letter of February 28th, and the subsequent return of the questionnaire I had submitted, which was received sometime in the latter part of March; I must once again apologize for the delay in this reply. Our Staff Departments underwent a drastic change, and work loads have been superimposed on many of the older staff at any rate: The following is submitted for your consideration, for what it is worth.

QUESTION 6—(a) Part 1—*Administration*—is only partly satisfactory, because we require an application be made for a building permit for any repairs, renovations, alterations, or changes of any size floor area, if the value of the work exceeds \$100.00, and includes interior and/or exterior.

ALSO:

Section 1.6—*Duties of the Owner*—should include a mandatory inspection when footings are formed or trenched, but prior to pouring any concrete, so that the authority having jurisdiction can determine whether the footings proposed are adequate due to the sub-soil texture and compressive strength: this should be subsection (d) (1), then Sub. (d) (i) could be sub. (d) (ii), and (ii) could be (iii) to include framing inspection after services installed in smaller buildings, especially where Plumbers and Electricians do a fantastic job of fracturing the structure.

Items (e) and (f) are almost impossible to control, as occupancy takes place prior to any written notice being submitted. In 99% of construction today, occupancy takes place prior to work completed on the permit. A Certificate of Compliance would be of greater value here. This certificate would be held until all infractions were corrected, and no clearance would be given until all infractions were corrected as controlled by the authority having jurisdiction.

Under heading *Penalties*—there should be an allowance for an investigation fee to be collected for any work that has commenced prior to the application for a permit, and that a *stop work order* could be imposed until such investigation is completed, and authority to proceed given after a Building Permit is issued.

QUESTION 6—(b) Part 3—*Use and Occupancy*:—interferes, and is inconsistent with Zoning by-laws in many areas, including definitions, and it is therefore difficult to decide which is the regulation to be imposed. At the present time, our Legal Department suggests that the regulation which is most restrictive shall apply, and this is not a satisfactory solution.

EXCERPTS FROM LETTER OF REPLY, DATED 5/8/69

Part 1—Administration

(i) *General*: We quite understand your comment about the general character of this Part. The Associate Committee have always recognized that individual municipalities may have some special local administrative requirements that must be mentioned in their own by-law. Part 1 is, therefore, intended mainly as a guide and this is, we think, made very clear in the printed text.

(ii) *Section 1.6*: You will be pleased to know that this important matter of the timing of excavation inspection has already been noted as a necessary revision for the 1970 edition of the Code.

(iii) *Occupancy Permits*: I trust that you will allow me to take the liberty of questioning your statements about Occupancy Permits. They are generally regarded as so important that the 1970 edition of the Code will include the suggestion (in Part I) that such permits should be a mandatory requirement. They are intended to ensure that a building is used for the purpose for which it was designed and for which the original Permit was issued. It is, for example, quite essential that the actual loads on the floors of a building shall be no more than the loads for which the floors were designed. An Occupancy Permit is one step towards ensuring this limitation.

May I suggest that you raise this matter for discussion at the October meeting of the Ontario Building Officials Association. I would be surprised if you found your experience (of 99% of construction being occupied before completion) to be universal. Certainly any building project with which I have been associated has been completed and officially accepted by the architect, for the owner, before it was occupied for its intended use.

TOWNSHIP OF NORTH DORCHESTER

with reply from Associate Committee on the National Building Code

In reply to your letter dated February 25th, 1969, with regard to our answer to the Questionnaire on the National Building Code. It is our opinion that some additional provisions as set out in *The Planning Act* should be added.

As an example the provisions of Section 31-(1)—15-16-23 and 24 should be incorporated into the administration portion of the by-law.

In short it is our opinion that this part of the by-law should be drafted to suit the particular area or municipality, so long as the requirements of *The Planning Act* are complied with.

EXCERPTS FROM LETTER OF REPLY, DATED 9/7/69

I have referred to *The Planning Act* and the clauses that you mentioned. I hope that the matters covered by sentences 15 and 15 of Section 31(1) can be included in the next edition of the National Building Code which is due to appear in January, 1970.

Correspondingly, I think you will find that the new edition will contain requirements that are similar to the contents of clause 23. I am puzzled by a reference to clause 24 because this goes beyond the normal limit of building regulations and is an appropriate matter of provincial legislation in which it now appears.

The final paragraph of your letter refers to the desirability of a by-law being 'drafted to suit the particular area or municipality'. If I am correct in my interpretation of your words, this is exactly the situation which the National Building Code was developed to counter. There is such general agreement that building regulations across this country and especially in any one province should be uniform that we have done our very best, now for over twenty years, so to develop the National Building Code that it does provide the requirements for any one municipality while providing a document that can be equally well used by other municipalities with appropriate changes for such variable matters as wind loads, rainfall, and snow loads.

CITY OF STRATFORD

with reply from Associate Committee on the National Building Code

In answer to your letter of February 25, 1969, regarding question 6 of your questionnaire dealing with Uniform Building Standards, I would like to make the following comments:

It is my feeling there is too much duplication in Part 3 of the National Building Code and there is confusion between Parts 3, 9 and supplement 5 as well as between Part 6 and supplement 5. I believe it would be desirable to combine Part 9 and supplement 5 and eliminate those sections of supplement 5 which are the requirements of Central Mortgage and Housing Corporation. This would make the National Building Code much easier to understand and administer and it would also make the term "Good Practice" mandatory.

With respect to the Province forming its own building code, I do not believe this is necessary. I am a firm believer in the National Code and would suggest that the National Building Code of Canada be altered so that it is more acceptable to all Provinces and Municipalities and that it be a *National Building Code* as it was intended to be.

There seems to be no valid reason why there should be any difference in the regulations for the same building to be erected whether it be in Nova Scotia, Ontario, Saskatchewan, or British Columbia. The differences with respect to climate, earthquake, soils, etc., are fully covered in the National Building Code.

While the National Building Code is not perfect, a great deal of thought, time and effort has been expended by a great many knowledgeable people, experts in their own field, in the preparation of this code and the province should give serious consideration to its adoption.

EXCERPTS FROM LETTER OF REPLY, DATED 11/7/69

You will be glad to know that the Associate Committee some time ago decided to do with Part 9 and Supplement 5 exactly what you suggest and, in addition, to co-ordinate the new Part 9 with the new part 3 so that the entire National Building Code will be a coherent document.

These decisions are now being implemented and we have encountered no insuperable difficulties. Accordingly, I trust that you will find the fifth edition of the Code, when it appears in January, 1970, entirely in accordance with your suggestions.

Permit me to say what a pleasure it was to read the final two paragraphs of your letter. Opinions such as these coming from one such as yourself who is in close touch with building matters are a great encouragement to all of us here.

CITY OF GUELPH

with reply from Associate Committee on the National Building Code

As requested in your letter of February 25th, 1969, we submit herewith our reasons why we find certain sections of the present National Building Code unsatisfactory.

Part 1—Administration: This section in our building by-law has been expanded and has become more specific.

Part 6—Building Services: This section, while satisfactorily covering most aspects of building services, requires too much cross referencing.

Part 9—Housing: This section, in its present form, is of no value to the Building Inspector as the requirements therein are too general. This section makes reference to Supplement 5, 'Residential Standards,' however, it states that it shall be used as a guide and does not make a legal requirement. I understand that this situation will be corrected in the 1970 edition of the code.

Short Form Code: This code is not satisfactory for the many and varied types of buildings under construction and proposed in the City of Guelph.

EXCERPTS FROM LETTER OF REPLY, DATED 8/7/69

Part 1—Your desire to have this expanded is certainly no objection to the National Building Code since the Preface makes quite clear that the Associate Committee expects this Part to be amended or possibly re-written for local use using the Part 1 in the Code as a guide.

Part 6—Your comment about the difficulty of using this Section because of "too much cross referencing" is of great interest. So far as we know, Part 6 is the only Canadian document available as a guide to heating and allied requirements. The references to other documents were included to keep this Part down to a manageable size. Could you please favour me with one or two examples that make it difficult for you to use this Part?

Part 9—We quite understand your objections to this Part as written in the 1965 Code. Because of similar objections, this Part is being completely re-written for the 1970 Code in which it will be quite specific. We therefore hope that you will find the 1970 edition entirely suitable for your purposes.

Short Form—As the Preface makes clear, the Short Form was intended for municipalities very much smaller than the City of Guelph. We are, therefore, not surprised that you do not find it satisfactory. The Short Form of the 1970 edition will, however, be identical with the new Part 9. We hope that you will find it a handy supplement for the use of small builders in your city.

TOWNSHIP OF DYMOND

with reply from Associate Committee on the National Building Code

In reply to yours of February 25, 1969, I would advise that the Township of Dymond is not entirely in agreement with the National Building Code as we understand it for the following reasons:

First—As Dymond is mainly a rural municipality we do like larger homes with a minimum floor area of at least 800 square feet in most areas, larger in some, as we feel any dwelling smaller could become a liability rather than an asset to the municipality.

Second—We have tried to maintain higher minimum room heights by about six inches in most cases and feel this is more suitable to our requirements.

Third—We prefer a bedroom space of 80 square feet with a reduction to 70 square feet where a built-in bedroom cabinet is provided.

EXCERPTS FROM LETTER OF REPLY, DATED 8/7/69

The three points that you raise all refer to dimensions that you wish to have somewhat larger than those in the National Building Code for your Township. May I, therefore, explain that the National Building Code of Canada sets out *minimum* standards. These are based on the very best information available to the Associate Committee and are consistent with good standards for public health. Therefore, there is nothing at all to prevent any municipality using the Code as it stands but requiring slightly larger dimensions, such as those which you mention, for its own use.

In view of the study that has been given to dimension content in the National Building Code, I would be most interested to know why your municipality feels so strongly about somewhat larger dimensions. We have not encountered this situation, to my knowledge, in any other municipality in Ontario.

VILLAGE OF PICKERING

with reply from Associate Committee on the National Building Code

I have talked to our Building Inspector about certain parts of the National Building Code being unsatisfactory.

The main points raised were:

1. The lumber allowed by the Code is of lower grade than construction grade lumber.
2. The National Building Code allows studding, rafters and joist to have wider than 16" centres.

EXCERPTS FROM LETTER OF REPLY, DATED 9/7/69

Lumber Grades—To my regret I am unable to understand this comment since the Code contains a special table setting out the various grades that are available in lumber and specifying what the minimum grade must be for different types of end-use. In the preparation of this table, the interest of the consumer was always considered and the grades stated are generally regarded as being quite safe and satisfactory for the uses given. If your Building Inspector has any contrary comment, we would be most grateful if he would send this to us.

Studding, etc.—The dimensions given in the National Building Code for the spacing of studs, rafters and joists are all based on the results of careful research work and have the full approval of the most expert Committee that can be assembled in Canada on house construction. There is nothing to stop the use of closer spacing if this is ever found to be necessary. Again, we would like to hear from your Building Inspector if he can provide any evidence which shows that the spacing approved is not satisfactory.

CITY OF NORTH BAY

In reply to your letter of February 25th, 1969, we respectfully submit the following observations regarding the National Building Code and the practical application of the Code:

with reply from Associate Committee on the National Building Code

1. RESIDENTIAL STANDARD

- (a) The Residential Standard is an excellent document when used for housing only, but we cannot accept the standard covering the construction of apartment buildings as being adequate or a desirable type of construction for high density developments. Accordingly, our by-laws are now in the process of being amended to read: "apartment buildings containing six (6) or more dwelling units shall be non-combustible construction," etc. etc.
- (b) We are also of the opinion that the "common wall" of semi-detached homes should be constructed of masonry. The system of solid plate, insulation and staggered studs, as accepted by the Residential Standard, is, in our opinion and for reasons mainly of sound control, a poor substitute for the masonry wall.
- (c) The omission of sheeting on the exterior wall should not be an acceptable standard, at least when referring to the Northern Region.

- (d) It will be noted that the National Building Code, Part 9, Section 9.1.2. reads: "In this part where the term "good practice" is used, the appropriate provisions in the Residential Standard as published by The National Research Council shall be used as a *guide* by the authority having jurisdiction, etc. etc." In accordance with our City Solicitor, by using the word *guide*, the legal value of the document is somewhat reduced and the by-law adopting the Code should make provisions to clarify the legality of the documents.
- (e) We have been advised by our City Solicitor that, to be considered a legal document, each amendment or revision to the building code has to be read, passed and adopted by the Council, accordingly, the constant flow of revisions, clarifications and/or amendments, as issued in one form or another should perhaps be condensed into a yearly issue that could readily legally be incorporated into the by-law.
(This item equally applied to the National Building Code.)

2. THE NATIONAL BUILDING CODE

- (a) As evident from Item 1) (a), it will be noted that the standard for apartment building containing 6 or more dwelling units will be upgraded to "non-combustible" construction. We have, in fact, enforced this regulation for a period of approximately 6 months and have found that developers and builders in this area readily accept and agree with our stand on this issue.
 - (b) The National Building Code, as a whole, must be considered an excellent document and certainly should be used as a building by-law by all municipalities. We do, however, feel that certain provisions in the Code should be made that would allow the municipalities to enforce certain standards that would seem desirable for their own area or region, so the builders' requests for a uniform standard, in our opinion, is not practical.
3. Unquestionably, a professional engineer will, in most cases, have little difficulty in interpreting and using the information that is available in the Code, but for the small municipality employing less skilled officials, the experience can be somewhat frustrating. For that reason, some parts of the Code should be clarified and printed in a form that could be more readily interpreted and used by the building officials.

As a whole, the somewhat complicated structure of the Code is clearly reflected when the Code is used as a legal document and we find the City Solicitor to be extremely hesitant to use the Code as a singular basis for prosecutions.

We sincerely hope that the above comments, when assessed in conjunction with comments from other municipalities will prove constructive.

EXCERPTS FROM LETTER OF REPLY, DATED 11/7/69

1. *Residential Standards*

- (a) We agree in general that the Residential Standards should be restricted for housing. I think you will be satisfied with the requirement in the fifth edition of the National Building Code which will appear in January, 1970, which restricts the application of Part 9 to buildings up to three storeys in height and with a maximum floor area of 6,000 square feet.
- (b) This point is clearly a matter of opinion but your suggestion will certainly be considered in the preparation of the Part 9.
- (c) I would be most grateful if you could tell me the basis for this comment with regard to the omission of sheeting, as sheeting itself does not add very much to the insulation of the house structure.
- (d) I am interested in the opinion of your City Solicitor about our use of the word 'guide' but, with great respect, I must observe that this is just an opinion and we have no evidence to say that the Courts would not accept the exact wording of the 1965 Code.

At the same time, there has been so much misunderstanding about this feature of the 1965 Code that we are changing it completely in the 1970 Code. In this, Part 9 will be quite specific and there will be no reference to the Residential Standards since this will be identical with Part 9 with some additional material for CMHC.

- (e) We fully appreciate the nuisance of having too many revisions! Accordingly, another decision of the Associate Committee is that, after this year, revisions would only be issued once a year then in pamphlet form to permit easy legal adoption by municipalities such as yours.

2. *National Building Code*

- (a) My comment in (a) above refers to this point.
- (b) This comment touches on a basic matter which is open to much discussion. There is, however, so much advantage to be gained by having building regulations that are uniform in all essential minimum requirements across Canada that I feel confident that you would agree that this desideratum is more important than any slight variation for any one municipality.

3. *General*

Please be assured that we fully appreciate the difficulty that some Building Inspectors encounter in using more technical parts of the National Building Code. We are doing our very best to make the 1970 edition easier to use. In particular, it will be accompanied by a special explanatory pamphlet about Part 3 showing exactly how this should be used.

TOWN OF MIDLAND

"We are of the opinion a Uniform Building Code for the province would be most beneficial."

TOWN OF OAKVILLE

“Preparing to adopt the 1965 National Building Code.”

TOWN OF KENORA

“May adopt the National Building Code in 1969.”

TOWN OF PARRY SOUND

“We feel a Uniform Building Code for Ontario would be desirable.”

VILLAGE OF COURTRIGHT

“The size of this municipality makes it impossible to pay personnel to be highly qualified in this field. Possibly one inspector for an amalgamation of municipalities would be better for us.”

VILLAGE OF THORNLOE

“The Council felt that the National Building Code was too elaborate for the use of such a small village.”

VILLAGE OF CLIFFORD

“Ours is a small municipality and the village council examine the plans and county building inspector gives advice.”

TOWNSHIP OF BURFORD

“Lack of technical knowledge does not permit proper inspection; limited work does not warrant qualified personnel.”

TOWNSHIP OF WINDHAM

“More information should be given on prefab houses, both wood and metal structures.”

CITY OF CHATHAM

“Make the National Building Code more readable and specific; that’s our main concern.”

CITY OF SUDBURY

“The Fire Marshal does not permit adoption of the National Fire Code by Ontario municipalities. For this reason the City of Sudbury has found it necessary to pass a supplementary by-law covering matters in the National Fire Code.”

CITY OF NIAGARA FALLS

“We are most happy to see this study underway and anticipate a uniform code accepted by the province. It is hoped that a training course can be established by the province.”

CITY OF OSHAWA

“New draft by-law based upon 1965 National Building Code as amended, presently being processed.”

SAULT STE. MARIE

“Uniform building standards for Ontario are recommended.”

TOWN OF PETROLIA

“More simplified version of the Code would be more satisfactory.”

TOWN OF ORANGEVILLE

“No one should be appointed a building inspector in any municipality unless they are qualified to conduct intelligent inspections and report thereon.”

TOWN OF TILLSONBURG

“I feel that the only way a building code can operate properly is that a standard code be adopted by the province and be made mandatory. This Code should be administered at the county or regional level.”

TOWN OF SIMCOE

“Suggest the National Building Code be adopted for entire province—by provincial legislation; no option left for local municipalities to establish own building by-laws.”

APPENDIX C

REPORT OF SUB-COMMITTEE ON THE SUMMARY OF BRIEFS SUBMITTED BY ORGANIZATIONS

Sub-Committee

Grant L. Duff
G. H. Fleming
P. M. Keenleyside

PART 1—Letter from Chairman to Municipalities

January 3, 1969

Dear Sir:

The Committee on Uniform Building Standards for Ontario would like your assistance in their deliberations respecting their study of having a uniform building code for the Province of Ontario.

This Committee has been set up by the Minister of Municipal Affairs, the Honourable W. Darcy McKeough, to examine, report and comment to him on the merits of uniform standards, the extent to which they should apply and the means whereby such an end may be achieved.

We are interested in your opinions and request that you make them available to us in a brief. We suggest to you that the brief be submitted in accordance with the following suggested headings by February 6, 1969.

1. Do you favour a uniform code for the province?
2. Would the National Building Code of Canada be satisfactory as a uniform code?
3. What would be the effect, if a uniform code were adopted, on:
 - (a) The cost of construction
 - (b) The reduction of both on-site and off-site problems
4. What other provincial acts or regulations should be studied and amended to make a uniform code most satisfactory?
5. Do you consider that under certain conditions amendments and revisions to a uniform code might be allowed
 - (a) By municipal authorities
 - (b) By regional authorities
 - (c) By provincial authorities

6. Should a training course be initiated for municipal building officials and inspectors?
7. Should there be a board set up by the province to deal with—
 - (a) Approval of new materials and methods?
 - (b) Interpretations of a uniform code?
8. Any other comments?
9. If requested, would you appear before the Committee to present your views?

Yours very truly,

C. D. CARRUTHERS
Chairman

PART 2—General Summary of Briefs from 23 Organizations

Question 1.

All 23 organizations answered yes. A strong opinion was expressed for national adoption of one code.

Question 2.

Generally answered Yes. The affirmative was qualified as follows:

As a basis.

Modified for particular area.

Updating required.

Voluminous and needs revision and condensation.

Some sections ultra vires of provincial legislation.

Question 3.

Generally answered:

(a) Cost of construction—Relative reduction in relation to today's costs.

(b) On- and off-site problems—Reduction.

Question 4.

Consensus:

All provincial acts and regulations (including standards) should be reviewed, revised and deletions made and that which is worthwhile be retained and incorporated under a standard building code.

Question 5.

Generally answered: by provincial authority.

Hazards involved in permitting revisions.

Too free a hand would defeat uniformity.

Highly technical questions require assessment by very capable personnel.

Hazards involved in not permitting revisions.
Possibility of slow reaction to new techniques or materials.
Code's intent may be defeated by literal and legal application or regulations.
Provincial authority should be:
Sensitive to regional disparities (Indian reserves and summer cottages).
Capable of quick reaction.
Technically capable.
Closely associated with N.B.C.
(See individual comments.)

Question 6.
Generally answered Yes.

Points of concern
Several levels of qualifications required to cope with varying geographic needs.
Prequalifications.
Reductional standards.
Assurance of uniformity of interpretation.
Under whose control authority should building inspectors be—municipal or provincial?

Question 7 and 8.
See accompanying text.
(A summary of individual Toronto area briefs is included as Part 4 of this Appendix.)

PART 3—Summary of Individual Briefs from Associations, Organizations

Question
1. Do you favour a uniform code for the province?

1. Canadian Manufacturers Association	Yes and for the entire country
2. Canadian Construction Association	Yes and for the entire country
3. Association of Professional Engineers of Ontario	Yes
4. Ontario Plumbing Inspectors Association	Yes
5. Toronto Construction Association	Yes
6. Provincial Building and Trades Council	Yes
7. Ontario Association of Architects	Yes
8. Specification Writers Association of Canada	Yes

9. Ontario Municipal Association	Yes (implied)
10. Canadian Institute of Steel Construction	Yes and for the entire country
11. Hamilton Branch Engineering Institute of Canada	Yes (implied)
12. Canadian Institute of Public Health Inspectors	Yes
13. Ontario Council of the National House Builders Association	Yes and for the entire country
14. Office of the Fire Marshal	Yes
15. Urban Development Institute, Ontario Division	Yes and for the entire country
16. Construction Safety Association of Ontario	Yes
17. Ontario Association of Real Estate Boards	Yes endorsed submission of Ontario Council of National House Builders Association
18. The Ontario Retail Lumber Dealers Association Inc.	Yes
19. Association of Ontario Mayors and Reeves	Yes
20. Canadian Sheet Steel Building Institute	Yes
21. Ontario Municipal Association	Yes
22. Canadian Steel Industries Construction Council	Yes endorsed briefs submitted by members of association, i.e., Canadian Institute of Steel Construction, Canadian Sheet Steel Building Institute
23. Ontario Federation of Construction Associations	Yes National uniformity also desirable
24. City Engineers Association	Yes
25. Ontario General Contractors Association	Yes
26. Canadian Lumbermen's Association	Yes

27. Mechanical Contractors Association, Ontario	Yes Uniformly administered at the local level
28. Canadian Home Manufacturers Association	Yes
29. Portland Cement Association	Yes
30. Voluntary Brief from R. P. DeGrace	Yes

Question

2. *Would the National Building Code be satisfactory as a uniform code?*

1. The Canadian Manufacturers Association	Yes the 1970 Code
2. Canadian Construction Association	Yes no practicable alternative
3. Association of Professional Engineers of Ontario	Yes as a basis but may need modifications for particular requirements of some areas
4. The Ontario Plumbing Inspectors Association	Yes but excluding Part 7 pertaining to plumbing
5. Toronto Construction Association	Yes as the basis
6. Provincial Building and Trades Council	Yes
7. Ontario Association of Architects	Yes as a basis. Perhaps the 1970 code will prove to be fully acceptable
8. Specification Writers Association	Yes providing it is up-dated periodically
9. Ontario Municipal Association	Yes (implied)
10. Canadian Institute of Steel Construction	Yes
11. Hamilton Branch The Engineering Institute of Canada	Yes (implied)
12. Canadian Institute of Public Health Inspectors	Yes

- | | |
|--|--|
| 13. Ontario Council of National House Builders Association | Yes
for the rest of the country as well |
| 14. Office of the Fire Marshal | Yes |
| 15. Urban Development Institute, Ontario Division | Yes
The N.B.C. is the best code currently available |
| 16. Construction Safety Association of Ontario | Yes
The N.B.C. should be the nucleus of a uniform code |
| 17. Ontario Association of Real Estate Boards | Yes
and nationally also; answered as per Ontario Council, National House Builders Association |
| 18. The Ontario Retail Lumber Dealers Association | Yes
with possible slight changes to the existing code |
| 19. Association of Ontario Mayors and Rêeves | Not suitable: parts are designed as guidelines. Some sections are ultra vires of provincial legislation. Gives ideas but not minimal structural standards. Voluminous nature needs revision and condensation |
| 20. Canadian Sheet Steel Building Institute | Yes |
| 21. Ontario Municipal Association | Yes
Subject to the review of the board as set up under Question 7 |
| 22. Canadian Steel Industries Construction Council | Yes
endorsed briefs of members; see Question 1 |
| 23. Ontario Federation of Construction Associations | Yes |
| 24. City Engineers Association | Yes
as a basis |
| 25. Ontario General Contractors Association | Yes
The only practical answer |

26. Canadian Lumbermen's Association	Yes
27. Mechanical Contractors Association, Ontario	No Regulation 471 of the O.W.R.C. is considered better
28. Canadian Home Manufacturers Association	Yes
29. Portland Cement Association	Yes
30. Voluntary brief from R. P. DeGrace	Yes

Question

3. *What would be the effect if a uniform code were adopted on (a) Cost of Construction?*

1. Canadian Manufacturers Association	Reduction in cost
2. Canadian Construction Association*	Reduction in cost, except in municipalities without any standard. Increase of standard would increase costs in these areas only
3. Association of Professional Engineers of Ontario	Possibility of significant economies and would help prevent increases in cost
4. Ontario Plumbing Inspectors	Reduction in cost
5. Toronto Construction Association	Reduction in cost
6. Provincial Building and Trade Association	Difficult to say accurately but would likely bring down the unit cost of construction
7. Ontario Association of Architects	An overall economic saving would probably be effected
8. Specification Writers Association of Canada	Cost would tend to be less or level out
9. Ontario Municipal Association	(Not specifically answered)
10. Canadian Institute of Steel Construction	Cost would be reduced
11. Hamilton Branch Engineering Institute of Canada	Reduction in cost (implied)
12. Canadian Institute of Public Health Inspectors	Little effect or bearing on cost of construction

*See detailed comments from this association at end of Question 3.

- | | |
|--|---|
| 13. Ontario Council of the National House Builders Association | Without question a reduction in costs would occur |
| 14. Office of the Fire Marshal | Yes
Would expect lower cost of construction |
| 15. Urban Development Institute | Yes
Eventually with the introduction of a uniform code, substantial savings should be realized in both direct and indirect costs |
| 16. Construction Safety Association | Yes
It would assure quality for purchasers and it could be the means to introduce savings in costs by means of standardization |
| 17. Ontario Association of Real Estate Boards | Yes
endorsed submission of Ontario Council, National House Builders Association |
| 18. The Ontario Retail Lumber Dealers Association | Yes
This should definitely reflect a reduction or at least maintenance of cost levels in construction |
| 19. Association of Ontario Mayors and Reeves | Did not answer the question |
| 20. Canadian Sheet Steel Building Institute | Yes (as detailed) |
- To the architect and consulting engineer, it provides for simpler office practice. Uniformity eliminates the need to vary plans and specifications from community to community.
- To the contractor or builder, it permits easier setting up of programs and procedures for construction.
- To the enforcing official, it results in easier enforcement since all those in the building industry become more familiar with the regulations and/or code provisions.

To the material supplier, who must comply with standards for the assembly of materials, it results in the reduction of the variety of the products which must be handled and in turn leads to increased production.

All of these reflect a saving in time and money for society as a whole. Conversely, lack of uniformity can generally be claimed to increase costs.

- | | |
|--|--|
| 21. The Ontario Municipal Association | (a) The cost will go down
(b) It would reduce costs |
| 22. Canadian Steel Industries Construction Council | endorsed briefs submitted by members, see Question 1 |
| 23. Ontario Federation of Construction Association | Cost of construction would be reduced |
| 24. City Engineers Association | Reduction implied |
| 25. Ontario General Contractors Association | Reduction |
| 26. Canadian Lumbermen's Association | Reduction |
| 27. Mechanical Contractors Association, Ontario | Would not increase cost |

Question

3. *What would be the effect if a uniform code were adopted on
(b) Reduction of on-site problems and off-site problems?*

- | | |
|---|---|
| 1. Canadian Manufacturers Association | On-site—reduction
Off-site—considerable reduction |
| 2. Canadian Construction Association | On-site—reduction
Off-site—reduction |
| 3. Association of Professional Engineers of Ontario | On-site—reduction (implied)
Off-site—reduction (implied) |
| 4. Ontario Plumbing Inspectors | On-site—reduction
Off-site—reduction |
| 5. Toronto Construction Association | On-site—reduction
Off-site—reduction |

6. Provincial Building and Trades Council	On-site—reduction Off-site—reduction
7. Ontario Association of Architects	On-site—relative reduction Off-site—definite reduction
8. Specification Writers Association of Canada	On-site—reduction Off-site—reduction
9. Ontario Municipal Association	N/A
10. Canadian Institute of Steel Construction	On-site—reduction Off-site—reduction
11. Hamilton Branch Engineering Institute of Canada	Not specifically answered, reduction implied
12. Canadian Institute of Public Health Inspectors	On-site—reduction Off-site—reduction
13. Ontario Council of the National House Builders Association	On-site—reduction Off-site—reduction
14. Office of the Fire Marshal	On-site—reduction Off-site—reduction
15. Urban Development Institute	On-site—reduction Off-site—reduction
16. Construction Safety Association	On-site—reduction Off-site—reduction
17. Ontario Association of Real Estate Boards	Endorsed submission of Ontario Council, National House Builders Association
18. The Ontario Retail Lumber Dealers Association	Should go a long way towards alleviating both on-site and off-site problems as a result of standard requirements, etc.
19. Association of Ontario Mayors and Reeves	Did not answer the question
20. Canadian Sheet Steel Building Institute	Same as previous answer, part (a)
21. The Ontario Municipal Association	(a) The cost will go down (b) It would reduce costs

22. Canadian Steel Industries Construction Council	Endorsed the briefs submitted by their members; see Question 1
23. Ontario Federation of Construction Associations	On-site—reduction Off-site—reduction
24. City Engineers Association	On-site—reduction implied Off-site—reduction implied
25. Ontario General Contractors Association	On-site—reduction Off-site—reduction
26. Canadian Lumbermen's Association	On-site—reduction Off-site—reduction
27. Mechanical Contractors Association, Ontario	On-site—reduction Off-site—reduction

Cost of Construction: Comments by Canadian Construction Association

Assuming that the “uniform code” in the question refers to the National Building Code of Canada, the effect would be to reduce costs. Actually, the two parts of the question amount to the same thing inasmuch as the reduction of either on-site or off-site problems will result in at least decreased overhead costs.

It should be recognized that—in those cases where lower (or no) standards prevail—the introduction of a uniform code may well increase costs. However, in such instances the higher standards are deemed by the experts preparing the National Building Code to be desirable in terms of structural safety, health, fire protection, etc.

The cost savings resulting from the adoption of a uniform building code throughout Ontario will also vary from municipality to municipality, depending upon their present building code provisions. The scope for savings is indicated by the following examples:

Governments

Municipalities will no longer incur the very considerable expense of preparing, publishing and up-dating their own building codes. Provincial government departments, commissions etc. can design in accordance with a single standard for their projects throughout the Province.

Manufacturers

Uniformity of building code provisions for such a large market would facilitate larger production runs, fewer models and lower inventory costs. Manufacturers would not have to petition individual municipalities for building by-law amendments to permit the use of new materials or components, once it has been established that the latter usage was in accordance with the uniform code.

Designers

Those designing buildings would need to be familiar with only one set of building code provisions and would be freed from spending many hours studying the building regulations of each municipality where a project is to be located—or of re-designing projects to make them conform to local requirements. Also, designers would be able to use new materials and techniques permitted under the National Building Code and not be restricted by out-moded provisions of local building codes.

Contractors

Similarly, prime contractors and sub-contractors would not have to build under a maze of differing building codes, many of which have provisions that are either overly restrictive or inadequate. A uniform code would greatly reduce the present confusion, arguments and delays in obtaining decisions. Their employees would in like fashion not have to learn different procedures for different municipalities.

Building Officials

It is understood that the Ontario Association of Building Officials adopted a resolution last year recommending to the Ontario Government that the National Building Code of Canada be applied throughout the Province. Among benefits of such a situation would be the ability to obtain interpretations of provisions in the National Building Code through the Code's secretariat.

Owners and Tenants

In addition to the above factors, those owning or occupying buildings would also benefit cost-wise from speedier completions and lower fees and permit costs. Those wishing to build standard units in different municipalities could, with a uniform building code, obtain the benefits of large-scale orders.

Question

4. *What other provincial acts or regulations should be studied or amended to make a uniform code most satisfactory?*

The answers to this have been combined to provide a total list of acts that have been mentioned by any of those responding to the question. Whether valid or not, comments have been listed separately.

The Municipal Act
The Planning Act
The Construction Safety Act
The Elevators and Lifts Act
The Theatres Act
The Public Health Act
The Power Commission Act of Ontario
The Ontario Water Resources Commission Act
The Department of Education Act
The Public Schools Act
The School Administration Act

The Homes for Retarded Persons Act
The Homes for Special Care Act
The Mining Act
The Nursing Homes Act
The Tourist Establishment Act
The Energy Act
The Boilers and Pressure Vessels Act
The Factory Shop and Office Building Act
Air Pollution Control Act
Building Fire Safety Design Standard (Fire Marshal)

The Secondary Schools and Board of Education Act
The Separate Schools Act
The Industrial Safety Act
The Fire Marshals Act
The Hotel Fire Safety Act
The Egress from Public Buildings Act
The Public Halls Act
The Charitable Institutions Act
The Childrens Boarding Homes Act
The Day Nurseries Act
The Department of Labour Act
The Gasoline Handling Act
The Highway Traffic Act
The Homes for the Aged and Rest Homes Act

Swimming Pool Regulations
The Cities Act
The Fire Protection Act
Department of University Affairs Regulations
Ontario Hospital Services Commission Regulations
Realtors Act
Land Titles Offices
The Professional Engineers Act
The Architects Act
Central Mortgage and Housing Corporation Act
The Liquor Control Act Regulations and Standards
The Trend Excavators Protection Act

COMMENTS ON QUESTION 4:

1. Canadian Manufacturers Association
Multiplicity of requirements (exist) and the opportunities for conflict.
2. Canadian Construction Association
Same as above implied.
3. Association of Professional Engineers of Ontario
Co-ordination of provincial acts will be essential for maximum effectiveness.
4. Ontario Plumbing Inspectors Association
All regulations or acts dealing with building regulations or standards should be rescinded and centralized in the department responsible for administering the provincial building code.
5. Toronto Construction Association
Regulatory bodies at the provincial level are already numerous and appear to be growing. It is not efficient to have many departments or commissions involved in issuing permits and regulations for the control of buildings.
6. Provincial Building Trades Council
No comment.
7. Ontario Association of Architects
There are a great many provincial acts; regulations, under the acts; and 'guides' under the 'regulations' of the 'acts' that should be studied and amended in order to cause a satisfactory and uniform building code.

All authority for building standards should be transferred from the present 'acts' and 'regulations' to the authority of those empowered to administer the uniform building code.
8. Specification Writers Association
The provincial act giving each municipality the authority to issue its own building code must be revoked.

9. Ontario Municipal Association
No comment.
10. Canadian Institute of Steel Construction
Every provincial act that regulates or affects building construction should be reviewed with a view to providing comprehensive but relatively simple, enabling legislation, combined into as few packages as possible.
11. Hamilton Branch Engineering Institute of Canada
No comment.
12. Canadian Institute of Public Health Inspectors
Far too many existing codes have been designed by a host of agencies but are frequently at variance with one another. These should be blended to best achieve the results envisioned by the establishment of this proposed code.
13. Ontario Council of the National House Builders Association
All other provincial acts which give authority to anyone to enact or alter building regulations or standards should be changed to remove this authority and centralize it on the body responsible for uniform building code within the province.

In addition to the acts themselves, the regulations under the acts also require amendment to remove powers to promulgate building standard regulations.

There is little if any appeal from regulations and decisions made in this way under present circumstances.
14. Office of the Fire Marshal
Six acts were named and have been included in the total list.
15. Urban Development Institute, Ontario Division
Review most if not all provincial acts and regulations to determine to what extent the existing legislation affects the building industry and how it should be amended to ensure proper functioning of the uniform code in the province.

Twelve acts listed which have been included in the master list.
16. Construction Safety Association of Ontario
Recently submitted a brief to the Department of Labour of Ontario recommending studies and amendments to The Construction Safety Act and regulations. Copies forwarded to N.R.C. committee suggesting the comments should apply equally to Part 8 and Supplement 8 of the N.B.C.
17. Ontario Association of Real Estate Boards
Endorsed in total the brief submitted by the Ontario Council of the National House Builders Association. See their comments.

18. Ontario Retail Lumber Dealers Association
Listed 11 acts which are included in the master list.
19. Association of Ontario Mayors and Reeves
Did not answer.
20. Canadian Sheet Steel Building Institute
A co-ordinated review is required, with representatives of the respective departments to remove conflict where it exists, of not only the acts and supporting regulations of the various provincial departments that affect building construction directly, but also those requirements which deal with use and occupancy and control of materials which in turn affect the determination of buildings.
Because of this complexity, we believe that adoption of the NBC and NFC in Ontario in their entirety, by reference or otherwise is not now possible since certain sections would remain ultra vires of existing provincial regulations.
The initial steps therefore of necessity will be towards determination of the overlap and conflict of the applicable provincial requirements compared with those of the National Building Code, the National Fire Code and the referenced good practice standards.
21. Ontario Municipal Association
There are many provincial and municipal acts governing construction. They come under many departments. There should be one codification of all acts which deal with construction and there should be one unified inspection service for both on-site inspection and off-site consultation. Such service, of course, will have to be related to various provincial departments.
22. Canadian Steel Industries Council endorsed briefs already submitted by their members
23. Ontario Federation of Construction Associations
Every provincial act (and its regulations) that regulates or affects construction should be reviewed with the aim of providing comprehensive but relatively simple enabling legislation combined into as few packages as possible. It is particularly important that the number of administrative authorities be held to a minimum.
24. City Engineers Association
The objectives sought can only be achieved if the Government of the Province of Ontario provides for the appropriate revisions of all overlapping legislation, regulation and administration.
25. Ontario General Contractors Association
There are a number of provincial statutes which either themselves provide construction requirements or provide for the making of regulations concerning building standards. Included among these are the statutes and regulations applicable to factory inspection, fire regulations, safety requirements and others.

26. Canadian Lumbermen's Association

It would seem that the Office of the Fire Marshal has powers of a very arbitrary nature and it is not clear whether or not this office is responsible to any government authority. There is a recurring complaint to the effect that the Office of the Fire Marshal is never challenged on technical opinions. Complicating the matter relating to a uniform building code are the requirements of the following departments:

Department of Education

Department of Labour

Department of Health

Home for the Aged and

Rest Homes Act

Children's Institutions Act

Egress From Public Buildings Act

Public Schools Act

Schools Administration Act

Gasoline Handling Act

Homes For Special Care Act

Nursing Homes Act

Public Hospitals Act

Secondary Schools and Boards of

Education Act

Industrial Safety Act

Construction Safety Act

Elevators and Lifts Act

Municipal Act

There are others but we simply list the above to emphasize the perfectly horrible maze of bureaucratic red tape that must be put up with under the existing situation.

27. Mechanical Contractors Association Ontario

In respect to plumbing services and in view of the fact that Ontario Water Resources Commission is charged with the problems of water pollution and we are firmly convinced that this is the proper department of the Ontario Government to have such responsibility, regulation 471 should be the guiding legislation.

When this regulation has been studied (we understand some amendments are presently under consideration) and properly related to the legislation and departments following, we would recommend it become the plumbing code section of a uniform building code for Ontario and that its complete jurisdiction be left with the Ontario Water Resources Commission, including inspection and the control of local inspectors.

Since *The Municipal Act* governs relations with local municipalities and gives certain powers of legislation and inspection to the local councils, those sections affected would have to be studied and amended.

Since the Department of Health has jurisdiction over septic tanks and septic tank drainage, a study would have to include their legislation and needed amendment determined.

The Department of Labour has a considerable body of both legislation and regulations affecting all construction and particularly the mechanical trades and this would have to be studied and amended as found necessary.

The Department of Energy and Resources Management, through whom the Ontario Water Resources Commission reports, has also a body of legislation affecting the mechanical trades which would require inclusion in a study.

There is an area of responsibility resident in the Canadian Standards Association which must be fully considered.

Undoubtedly, there are other departments and acts which have some influence. However, those listed are the areas which affect the mechanical contracting segment of the construction industry constantly.

We are intimately concerned with the departments of Education and Financial and Commercial Affairs, but question whether their legislation requires study in this context.

While the National Building Code, including Part 7, is not provincial legislation, we believe it should be considered with the study of provincial acts and regulations.

Question

5. *Do you consider that under certain conditions amendments and revisions to a uniform code might be allowed?*

- (a) by municipal authorities?
- (b) by regional authorities?
- (c) by provincial authorities?

1. Canadian Manufacturers Association Partly Yes

Whether the responsibility remains with the municipalities, by virtue of their authority to grant or withhold building permits, or with the province it appears to us that the authority concerned should be free to accept products which, due to recent development, have not yet been included in the National Building Code. They should not however be free to reject any standard or product which has found acceptance in the code.

Provincial authorities could probably assist by contributing to machinery which would facilitate more frequent revisions of the National Building Code.

2. Canadian Construction Association No

Such exceptions would quickly dissipate the benefits of a uniform building code.

3. Association of Professional Engineers of Ontario Qualified

While stability of requirements will be an important characteristic of a code, nevertheless it must also possess a degree of flexibility that will permit it to react to the dynamic environment in which it will be used. Amendments and revisions must be possible, but approval or authority for the adoption or incorporation of change should rest at the highest possible level—nationally if possible. However, assuming the Province of Ontario then the province should be the one and only authority for revision.

4. Ontario Plumbing Inspectors Association Province Yes

The Ontario Plumbing Inspectors Association looks with disfavour upon the power of any local municipalities to make amendments or

revisions to provincial regulations. Amendments to the present Regulation 471 respecting plumbing are now made through recommendations of a technical and advisory committee which receive submissions for amendments. If uniformity of building regulations is to be achieved, any enabling powers delegated to municipal authorities would render provincial regulations non-enforceable.

If a regional authority wished to give special dispensation (due to climatic or topographical conditions) to a certain regulation, it should only be by permission of the provincial authority.

If a uniform building code is established by provincial authority, this body should have the prerogative in approving amendments or revisions to same. Technical and advisory committees should be established, and all submissions for changes or additions of any nature should be made through these established channels. All persons concerned should be prepared to abide by the decisions of those with expert knowledge it is expected would be appointed to the various committees. Any relaxation permitted beyond these principles would result in non-uniformity of regulations, because this Association has ample evidence that when local autonomy is allowed, there are as many variations equalling the number of municipalities concerned with administration.

5. Toronto Construction Association

Municipalities Yes
Region, Province No

Amendments and revisions to a uniform code should be allowed by municipal authorities in the form of appendices to a standard code; but the province should insist upon a uniform format that draws attention clearly to the variations from the standard. Under our present structure of local government, the municipalities are the correct field for this type of decision. Under no circumstances should regional or provincial authorities get into this act. The situation is already sufficiently complex with two levels of government, i.e. national and municipal, in the field. The more levels attempt to create a position in building code definition, the more obstacles there will be to making adequate progress in the application of advanced technology to building construction.

6. Provincial Building and Trades Council

No

We are of the opinion that in order to have a uniform code only a central source should have the authority to amend or revise same. Municipal, regional and provincial authorities should have the opportunity to recommend amendments or revisions but these should go to the central source and be examined thoroughly by experts and if they have merits be adopted by the national body and be enforced for all.

7. Ontario Association of Architects

Qualified No

The Ontario Association of Architects is of the opinion that neither the municipal authority nor the regional authority should be allowed to amend or revise the uniform code with too free a hand. If they

are permitted to do so, the uniform code would quickly become the non-uniform code and the wheel would turn full cycle again. Within specific limits it may prove advantageous to permit some latitude to the municipalities.

We believe it would be preferable to have a national code authority or a provincial authority empowered to amend and revise the code. In practice we would expect the municipal authority, regional authority and others to place their requests for changes or amendments before the provincial authority. The request would then be considered by the provincial authority in conjunction with the National Building Code committees and if the requested change or amendment was deemed wise, reasonable and prudent, it would be incorporated in the uniform code and made applicable across the province.

This process would automatically up-date the uniform code. However, this might prove to be too lengthy a process and permission to take advantage of a genuine cost saving innovation might be seriously delayed.

8. Specification Writers Association of Canada Qualified No
Amendments and revisions to a uniform code should be permitted only under the authority and permission of the province, and only if:
- (a) A local condition not adequately covered by the uniform code can be proved as justification.
 - (b) All modifications are (as stated before) printed as a separate document and advertised to architectural, engineering, and contracting associations at the expense of the municipality.
 - (c) An addendum attached to the uniform code has listed the name of the municipality and the nature of the modification granted under provincial authority.
 - (d) These modifications are reviewed every five years at time of updating the uniform code, and cancelled if conditions have changed.

If these restrictions and possibly others, are not applied in the act, within a few short years the whims, caprices, and prejudices of municipal councils will reproduce the plethora of varying codes which exists today.

9. Ontario Municipal Association Provincial Yes
The provincial government be requested to revise the National Building Code to a form that can be enforced as a provincial statute, and that a permanent provincial-municipal advisory committee be set up to:
- (i) Study and recommend on individual provincial and municipal amendments to the code.
 - (ii) Seek representation on the National Building Code committee.
 - (iii) Set up an educational program through community colleges or some other agency for building inspection officials.

The building industry be encouraged to bring forward new methods of construction and municipalities be encouraged to allow such materials and methods to be used, and the federal government be requested through the National Research Council or some other body, to ascertain and advise provincial and municipal officials if such new material and methods meet the National Building Code requirements.

10. Canadian Institute of Steel Construction

Amendments and revisions to the uniform code should be allowed by the authorities mentioned subject to the provision of appropriate safeguards for preserving the objects of uniformity and avoiding a proliferation of exceptions to the established code. It is therefore suggested that a provincial board, non-political in character, be established for dealing with proposed changes and also to serve as a means of recourse for persons aggrieved by the law or its administration.

11. Engineering Institute of Canada
Hamilton Board

In the event the province does not pass legislation adopting the NBC on a province-wide basis, it certainly would be advantageous for any regional level of government to adopt the National Building Code. The adoption of the NBC at the highest possible level of government is our strong desire for the following reasons:

1. Code writing is a time consuming business. Large staffs are required. One national code avoids duplication of effort and costs.
2. Code writing requires the hand of highly skilled experts. Such experts are available to the National Building Code from the National Research Council and the already established Associate Committee for the NBC. No municipality in Canada could ever amass a technical group of equal competence.
3. Most municipal codes are out of date. It is difficult for new products and technology to hit the market since manufacturers and their associations must approach every code writing body. This "time lag in technology" and approach for new idea acceptance places an added cost on the Canadian economy. The NBC is revised at least every five years and no municipality to our knowledge can hope to meet or has met this record.
4. The multiplicity of codes now weighs heavily on the economy. A specific product method of fire protection, etc. can be fully approved under the NBC and by a given municipality. A neighboring municipality legislates the exact same product, etc. A standard has been deviated from and extra costs result. There is no technical justification for such significant differences. Normally, it's a result of item 3.

In summary the NBC has set high standards, has a highly competent make up and is functioning well. Any regional government should avail itself of these benefits and adopt the NBC verbatim.

12. Canadian Institute of Public Health Inspectors

Yes

13. Ontario Council of the National House Builders Association

If uniformity of building regulations is to be achieved in the Province of Ontario, no revisions, alterations or additions should be allowed from the provisions of the National Building Code. Ample opportunity is provided for amendments to the NBC through the Associate Committee and, in our opinion, all submissions for changes of any nature should be submitted through the established channels. One and all should be prepared to abide by the decision of the experts on the various committees responsible for the preparation of the National Building Code and no local amendment thereto should be allowed.

If any relaxation of this principle is permitted, there will not be uniformity of building codes throughout Ontario because we have ample evidence that when local autonomy is allowed, we get almost as many code variations as there are individual municipalities to adopt them. Technically we can see no reason why building requirements should vary between individual municipalities, except for those climatic and other variations which are presently adequately provided for in the National Building Code.

In the event that municipalities in Ontario consider that variations from the National Building Code are desirable they have the same privileges as anyone else to submit them for consideration by the Associate Committee for inclusion in the code. The decision of the Associate Committee should be accepted by one and all. In any event, provisions which are decided to be desirable should automatically be enacted by all municipalities in the province and not simply by one or a few. Only in this way can uniformity be maintained.

14. Office of the Fire Marshal

Qualified Yes

Under certain conditions amendments and revisions to a uniform code might be allowed.

- (a) By municipal authorities under provincial control or guidance
- (b) By regional authorities—under provincial control or guidance
- (c) By provincial authorities—under NBC committee guidance

15. Urban Development Institute, Ontario Division

The Urban Development Institute recommends that, if at all possible, the authority to amend and revise the uniform code should remain with the authority responsible for its preparation. However, with the division of powers in Canada, it is recognized that this is not practical. It is therefore our recommendation that a board or committee be set up at the provincial government level and that such committee or board be vested with full authority to authorize amendments and revisions to the uniform code adopted by the Province of Ontario.

If the National Building Code is the code adopted, it is recommended that the provincial body work very closely with the Associate Committee of the National Building Code to ensure, as best as possible, the maintenance of a truly national code. It is our feeling that if other bodies below the provincial government level were given authority

to amend and revise any uniform code, in a very short time we would again find ourselves without uniform building standards and regulations.

Recommendations for amendments and revisions would, in all probability, emanate from both regional and municipal authorities, as well as industry at large.

16. Construction Safety Association of Ontario

We are of the opinion that in order to have a uniform code only a central source should have the authority to amend or revise that code. Municipal, regional and provincial authorities should be encouraged to recommend amendments or revisions to the central source for thorough examination by experts, and if they have merit they should be adopted by the national body and be enforced for all.

17. Ontario Association of Real Estate Boards

Endorsed brief of Ontario Council, N.H.B.A.

18. Ontario Retail Lumber Dealers Association

The National Building Code is an established code open to revisions at fixed times. If amendment procedures are set up which would allow municipal, regional or provincial authorities to change the code, then the whole concept of a uniform building code would be defeated.

19. Association of Ontario Mayors and Reeves No specific answer

20. Canadian Sheet Steel Building Institute Yes to all three

We believe that it is self evident that our society will continue to require regional differences. Unless the master planning of all communities in all areas of the nation was firm and fixed, and hence regional or area initiative strangled, then differences will exist. Differences in planning can only result in differences in zoning, differences in zoning will result in differences in the by-laws at the enforcement level.

Differences in building and fire codes should therefore be provided for in the legislation but the differences should only be authorized after proper scrutiny and proven cause.

This will necessitate the establishment of a standing provincial committee reporting to Cabinet through the appropriate Minister. The committee would consist of several small boards, two of which would be as suggested in your questionnaire No. 7.

When requests for regional or local differences are being considered, the senior committee would review the recommendations of the applicable board and, because of the broader make-up of the senior committee, the broader implications of requested changes could be considered.

The provincial committee would seek representation on the national bodies.

In practice, co-ordination of the boards would likely be provided by interlocking secretariat.

Boards:

- (a) Technical interpretation.
- (b) Design performance criteria.
- (c) Materials.
- (d) Legal (case history)

The legal enforcement officer (city solicitor), needs a board to turn to for co-ordinated advice to remove conflicting legal opinion.

When case history is felt warranted, then this would be recommended by the board and its advisors, whether it is felt the enforcing official or other party should seek determination in court.

- (e) Zoning.

Co-ordinating group between the proposed senior provincial committee and the existing OMB.

- (f) Planning.

Co-ordinating group between the proposed senior provincial committee and established master provincial planning committee.

- (g) Personnel Board.

Co-ordinates the confirmation of appointments of the designated enforcing official as recommended by the regional or municipal council and what is more important, co-ordinates the removal of that official as may be recommended by the council. The final decision concerning the designated regional or local enforcing official is no longer at the immediate discretion of the regional or local political subdivision.

21. Ontario Municipal Association Yes to all three and subject to the review of the Board as set up under question 7

22. Canadian Steel Industries Construction Council

Endorsed the briefs previously submitted by members

23. Ontario Federation of Construction Associations No

Provision exists for amendments to the National Building Code through the Associate Committee, and all submissions for changes should follow the established channels. The existing situation gives ample evidence that, if other methods of revision are allowed, the aim of uniformity will be unattainable.

24. City Engineers Association

It is also recommended that provision for revision, amendment and uniformity of interpretation be instituted in a manner similar to the procedures adopted by National Research Council through its Associate Committee on the National Building Code with some provincial arrangement for co-operation with that organization in these matters.

25. Ontario General Contractors Association

No

It is tempting to suggest that by allowing municipal, regional or provincial authorities to amend a province-wide standard, this permissive approach would facilitate the adoption of a uniform code; we cannot, however, qualify our answer to this question for that reason. We would contend that by adopting a National Building Code for the province, the government of Ontario would be taking advantage of the facilities and procedures which already exist to bring about appropriate revisions. If jurisdictions within the province were authorized to make independent changes to a uniform code, then it is virtually certain that we would return to the undesirable multiplicity of standards which now exist. We emphasize again that making amendments through established channels is the only sensible approach and will achieve results favourable to the province as a whole.

26. Canadian Lumbermen's Association

It is our opinion that questions 1, 2 and 5 are closely related and that it is almost impossible to discuss question 5 without reference to the other two. Generally speaking, we feel that the National Building Code is a good code, an adequate code—having consistently been improved since it was originally issued in 1941. It is our opinion that the writing of the National Building Code—which developed from a consensus of many knowledgeable building persons from coast to coast—provides a perfectly adequate basis as a building code for any community, not only in the Province of Ontario, but in every province and territory.

We feel that any building code is designed simply to guarantee structural sufficiency and to ensure adequate safety for a person using the building in question and also for those persons occupying adjacent structures. It seems to us that the code which provides these features in the city of Halifax will provide the same features in Metropolitan Toronto or Vancouver. In many areas, a building code is a pretty subjective piece of work and can only reflect a consensus of opinion of those charged with the task of writing it. The opinions expressed by these people can only, of course, be based on their own experience. This being the case, we certainly favour the varied experiences on a coast-to-coast basis which have gone into the make-up of the National Building Code—rather than the very local experiences—sometimes referred to as “prejudices” which often make up a code of a purely local or regional basis. In the matter of amendments and revisions by any authority other than by the already established revision procedure set-up under the National Building Code, we would be very wary. The important feature, in our opinion, of the National Building Code is that it is an established code open to revisions at fixed times. If amendment procedures are set up which would allow municipal, regional or provincial authorities to change the code, then the whole concept of a uniform building code flies out the window.

In our opinion, the revision provisions now available under the National Building Code are adequate but, of course, as in all things are capable of being improved. From the point of view of the Province of Ontario—or any other province—it would seem logical that suggested changes or amendments to the code could be funneled through some provincial body rather than having each municipality—when the spirit moves it—sending in suggestions relative to revisions.

27. Mechanical Contractors Association Ontario

(a) *By Municipal Authorities?*

It would seem to us that permitting of such action could negate much of the advantage of having a uniform code and indeed could well result in not having a uniform code.

(b) *Regional Authorities?*

We believe the same reasoning applies here as in (a).

(c) *By Provincial Authorities?*

We believe the uniform building standards code should be provincial legislation, passed by and capable of amendment and revision by the Legislative Assembly. No act should ever be allowed to become a “straitjacket” on progress or changing needs. We do believe uniformity, both as to code and administration throughout the Province of Ontario, is desirable and in the best interests of the construction industry and its clients.

Question

6. *Should a training course be initiated for municipal building officials and inspectors?*

1. Canadian Manufacturers Association

Qualified

Comments received from members of the Association indicate great concern about the functions of municipal building inspectors. Before any training program for such officials is considered, the Association suggests that it would be preferable to clarify the duties of the inspectors. It feels that these should be restricted to inspection—to satisfying themselves that the products being used do indeed comply with nationally recognized codes. The inspector’s role should be one of enforcement, not a discretionary one to justify rejection of nationally agreed codes. Such decisions at the municipal level lead only to the fragmentation of standards.

2. Canadian Construction Association

Yes

Such courses would be especially desirable prior to and during the stage when the uniform code is introduced.

3. Ontario Association of Professional Engineers

Qualified

Considering all factors, it is suggested that the difficulties and the costs inherent in such a program would not be offset by value gained. It is pointed out that the colleges of applied arts and technology already provide evening classes which include the fundamental information required. With the adoption of a uniform code, the necessary changes could easily be incorporated into the appropriate curricula. Suitable

direction or advice to the colleges themselves would assist in making an easy transition.

It is worth noting that the availability of such courses in the colleges of applied arts and technology should ensure a future supply of suitably trained persons to fill positions as building officials and inspectors.

4. Ontario Plumbing Inspectors Association Yes

Persons responsible for the examination and interpretation of proposed building plans and the approval of the completed structure should have received technical training in their respective spheres.

The Ontario Plumbing Inspectors Association has always stressed the importance of qualified personnel, and has recently been responsible for the establishment of a course for the certification of Plumbing Inspectors, sessions for which have recently been completed at the George Brown College. Each candidate will be issued a certificate upon the successful completion of the course.

An approved course of training should be a prerequisite to the appointment of all building and plumbing inspectors, or a training course should be completed prior to permanent staff status.

5. Toronto Construction Association Yes

While the province should keep well out of the details of a building code, it could play a very useful part in helping to improve the efficiency and effectiveness of individual municipal building officials and building departments. A program in the province in this field could have several parts:

- (a) Courses on specific portions of building technology, designed specifically for the engineer and for the inspector. Safety, under the present regulations, would form a part of such a program.
- (b) Development and promotion of more efficient method of processing applications for building permits. The principle of checking in detail the structural calculations of each portion of the construction of each building should be dropped. Substitute for this the requirement that all applications for building permits for buildings of more importance than, say, a single family dwelling, be accompanied by drawings and specifications prepared by a registered professional engineer together with a signed and stamped statement of professional opinion to the effect that the professional engineer or architect responsible is satisfied that the drawings and specifications conform with the requirements of the relevant building code. This procedure would be policed by making spot checks on designs. Incompetent or misleading reports would be referred to the associations of professional engineers or architects for disciplinary action.
- (c) There should be a continual re-examination and re-appraisal of procedures and policies by municipal building officials and inspectors. The province can stimulate this by providing facilities and encouragement for regular meetings.

6. Provincial Building and Trades Council Yes
A great deal can be done to educate building officials in various areas. The major municipalities have qualified and trained staffs and in the smaller communities this is not the case. Also, periodical area seminars should be called in order to acquaint building officials and inspectors with any amendments and revisions to the code and the proper interpretations of the regulations as they exist. Without proper enforcement of the code and the necessary penalties for violations of the code, even the best code in existence would be a useless instrument for the protection of the general public.
7. The Ontario Association of Architects Yes
Prequalification required
It is essential that training courses be established for building officials and for inspectors. The success of implementing a uniform code depends to a great degree on uniform interpretation and inspection. Professional training is a necessary prequalification for municipal building officials and . . . such officials should be recruited from the membership of either the Ontario Association of Architects or from the Association of Professional Engineers of Ontario.
Building inspectors should also be prequalified and should be at least graduates equal to Ryerson or have obtained the equivalent experience, i.e.: accredited architectural or engineering technologists.
There are undoubtedly many problems that must be resolved before a uniform building code is established and implemented in a province as large and varied as Ontario. In sparsely populated areas or in areas where a small amount of construction occurs, it may prove economically difficult to obtain professionally trained personnel. Perhaps this problem could be overcome by grouping such municipalities into larger units for purposes of obtaining qualified building officials and inspectors.
8. Specification Writers Association of Canada Yes
Enforcement of the uniform code should be the responsibility of municipalities. Interpretation of the code however could vary from place to place due to the fact that the code inevitably will have ambiguities. For the first five years, or until it can be reasonably assumed that a good working knowledge of the code exists with an agreed understanding across the province, as many courses should be made available as can guarantee a common agreement on the intent.
9. Ontario Municipal Association Yes
Set up an educational program through community colleges or some other agency, for building inspection officials.
10. Canadian Institute of Steel Construction Yes
The desirability of a training course is strongly supported. It is impossible to administer a modern building code justly and efficiently without proper training. The administrative authorities are the first to recognize this and are appealing for help in training new employees and upgrading the capabilities of those now operating.

The desirability of education with respect to building codes applies also to architects, engineers and constructors, especially in the field of safety from fire.

11. The Engineering Institute of Canada
Hamilton Board Yes (implied)
12. Canadian Institute of Public Health Inspectors Yes
Most emphatically. This has been under discussion and study by the Ontario Building Officials Association for a number of years, and indications are that a pilot project may be launched later in 1969. Such a project would be designed to up-grade the building officials' knowledge and performance and would require these officials to cover certain subject matter, such as administration, law familiarization, etc. Exclusive of the mandatory subject matter, the course would be designed to permit selective study of related matters. Course subject matter, to be effective should be taught by the most competent men in the field, and should be so designed to serve the needs of all officials, regardless of the size of their home municipality.
13. Ontario Council of the National House Builders Association Yes
A great deal could be done to educate the persons responsible for the enforcement of building regulations in the province. While some of the major municipalities presently have adequate and well trained staffs, many of the intermediate and smaller communities do not have properly qualified people to administer their regulations.
14. Office of the Fire Marshal Yes
15. Urban Development Institute, Ontario Division Yes
The only way to ensure uniform and consistent interpretations is to ensure that builders, building inspectors and officials are adequately trained. For this reason, it is absolutely essential that training courses be made available to all concerned. Initially, it would be desirable that such training courses also be made available to representatives of various trades and industries, in order that they also might familiarize themselves with the code and its requirements.
16. Construction Safety Association of Ontario Yes
Without aggressive enforcement of codes, even the best codes would be useless instruments for the protection of the general public. Aggressive enforcement would only be effective if the enforcing officials were well trained in the correct interpretation of the codes which they implemented. Training courses are mandatory if there is to be any effective implementation of the code.
17. Ontario Association of Real Estate Boards Yes
endorsed brief of Ontario Council,
National House Builders Association
18. Ontario Retail Lumber Dealers Association Yes
Prefer national level

19. Association of Ontario Mayors and Reeves Yes
A training course for municipal building officials and inspectors is desirable. Any building inspector should have a general background of building knowledge to be eligible for such a position, but further instruction on the use of any new code and regulations is valuable.
20. Canadian Sheet Steel Building Institute Yes
Such a training course and the resulting level of qualification for the enforcing official would necessarily be of a varying degree depending, for example, on the size of the municipality or region. There are certainly technical basics concerning principles of structural and fire safety and administration applicable to all, but the complexities of a large city administration do not necessarily need to be imposed on the smaller community officials. We envisage several levels of qualifications.
21. The Ontario Municipal Association Yes
22. Canadian Steel Industries Construction Council Yes
endorsed briefs
submitted by members
23. Ontario Federation of Construction Associates Yes
The desirability of a training course is strongly supported. Just and efficient administration of the National Building Code should not be expected without proper training. Such training should be based upon clear definition of the duties and responsibilities of the personnel concerned.
24. City Engineers Association Yes
Enforcement of uniform building standards should and will be by local municipal staffs and . . . these should be sufficiently and properly trained as quickly as possible under arrangements similar to those provided by the government for police, fire and other personnel.
25. Ontario General Contractors Association Yes
An appropriate training course would be extremely beneficial and the benefits of such training would flow in every direction—to the administering authorities, to the construction industry and to its customers.
26. Canadian Lumbermen's Association Qualified
This should not be done solely at the provincial level. Any such school we feel should be a school which building inspectors from all provinces could attend and therefore, as a result, hopefully obtain a national interpretation of something which in our opinion should be of national competence.
27. Mechanical Contractors Association Ontario Yes
A uniform understanding of applicable legislation and practice is highly desirable and indeed necessary. Whether this is better secured by leaving the officials under municipal control or by integrating them with the provincial administration, is something to be determined.

Question

7. *Should there be a board set up by the province to deal with*
(a) approval of new materials and methods
(b) interpretation of a uniform code?

1. Canadian Manufacturers Association Qualified

The Association's recommendation is that the province has a role to play in eliminating much of the fragmentation in standards which now prevails. These efforts should, it is suggested, be directed towards establishment and recognition of national standards. Inspection, directed provincially but administered municipally, should be only for the enforcement of national standards.

2. Canadian Construction Association No

This would be redundant if the National Building Code of Canada is adopted as the uniform code.

3. Association of Professional Engineers of Ontario Qualified

Suitable approval procedures relating to new materials and methods are essential to the practical success of the proposed code. It would appear desirable to investigate thoroughly the procedures already in use by the Central Mortgage and Housing Corporation, and the Canadian Standards Association. It may be possible to adopt these approvals as now given, and thus to avoid establishing a separate approvals body. Failing this possibility, however, a provincial approvals board would be necessary.

With respect to the interpretation of the terms of a uniform code, it is obvious that a competent service must be provided. Attention is directed to the very successful service provided by the Ontario Hydro Electric Power Commission with respect to the electrical code, which service is provided by properly qualified persons employed by the issuing authority. In the case of a uniform building code, the same formula should be applied. If the issuing authority is the Department of Municipal Affairs, then that Department should employ a staff suitably qualified to provide interpretations of the code.

4. Ontario Plumbing Inspectors Association Yes

There should be a technical and advisory committee established with sub-committees composed of representatives of building and mechanical contractors associations, Ontario building officials, Ontario Plumbing Inspectors Association and representatives of the plumbing and pipe fitting industries and building trades associations, etc. There should also be an associate committee to act in strict liaison with the National Building Code, and thereby benefit through research constantly carried out by the Division of Building Research of the National Research Council.

There should be a committee on interpretations established which would be representative of all bodies mentioned in 7. a), whose duty it would be to rule on and review all interpretations of a uniform building code insofar as their particular jurisdiction is concerned. It would be necessary for such a committee to meet regularly so that requests

for interpretations can be rendered in a reasonable time. Any publication of an act relating to a uniform building code should contain a preamble of interpretations relative to the technical terms used therein.

5. Toronto Construction Association No
Both these items are much better done at the national level, for exactly the same reasons that the code itself is more efficiently handled on a national basis.
6. Provincial Building and Trades Council Yes
Qualified
This board should work in close liaison with the National Associate Committee so that any approval could be made national.
Interpretation of the code could come down from the national body to the provincial board and the provincial board would have the job to pass on this information to local municipal officials and inspectors through training courses and seminars sponsored by this board.
7. Ontario Association of Architects Yes
Qualified
We would answer both questions in the affirmative. Presumably it would be one group responsible for both approval and interpretation. We recommend that such a provincial branch should have close ties with the National Building Code committees of the National Research Council and preferably with cross appointments.
This arrangement would allow a speedy interchange of knowledge and would avoid the expense involved in duplication of effort. It would assure the province of access to a large group of knowledgeable people and direct access to the facilities of national research.
8. Specification Writers Association of Canada Yes
Assuming the code is a provincial responsibility, and that modifications by municipalities cannot be made without provincial authorization, it will be absolutely essential for the province to establish the necessary means to permit new materials and methods to be assessed, and rejected or approved. If approved, an addendum to the code would be issued periodically which will publicize the additions; and publicized too would be cancellation of materials or methods found in practice to be defective or not conforming to the intent of the code.
A board will need to be established to resolve the conflicts which will arise out of interpretations of the code. This could take the form of regional inspectors with known headquarters in order to expedite decisions, and not cause the delays which would occur in the work by protracted or delayed hearings in a remote city.
Another function of such an office would be to check work in a municipality to ensure the provincial act was being followed.
9. Ontario Municipal Associations Not specifically answered

10. Canadian Institute of Steel Construction Yes
 The ideal situation would be to have one provincial board to approve the use of materials and methods. There should be flexibility enough to permit minor on-the-job decisions by the administrative authority from which there could be an appeal to the board for final judgment. The same recommendation applies to interpretations of a uniform code. Assuming that the National Building Code is adopted there would have to be close liaison with the National Building Code Associate Committee (and other provincial bodies) making interpretations on the same items. The desirability of uniformity of interpretation on a national basis is obvious. Means should be considered for liaison of all concerned in the interest of uniformity of interpretation of intent of a uniform code. This again points up the desirability of one body for each province with final responsibility for interpretation.
 Such a board of approvals and appeals must be non-political in character.
11. Hamilton Branch
 Engineering Institute of Canada Not specifically answered
12. Canadian Institute of Public Health Inspectors Yes
 (a) Also the establishment of a laboratory to determine the suitability of materials and their methods of application should be considered.
 (b) Interpretation and rapid changes in materials and techniques has long been a matter of considerable controversy in applying the National Building Code of Canada by different municipal officials.
13. Ontario Council of the National House Builders Association
 (a) It would be preferable if approval of new materials and methods could be done nationally rather than provincially but in the absence of a national body to undertake this work it would be helpful if it could be done on the provincial level. The ultimate objective of any provincial approval authority, however, should be subject to the ultimate creation of a national authority for this purpose. An approval body would greatly simplify the introduction of new materials and methods and eliminate the present requirement to seek and obtain approval from every separate community.
 (b) Interpretations of the National Building Code could best be handled by the Associate Committee on the National Building Code, together with the staff support of the Division of Building Research of the National Research Council. Since this is the body which is responsible for the writing of the code, it would seem logical to leave its interpretation in their hands.
 It is important, however, that requests for interpretations must be rapidly dealt with and answers supplied.
14. Office of the Fire Marshal Yes to both

15. Urban Development Institute, Ontario Division

(a) The U.D.I. has considered the suggestion that a provincial board be set up to deal with the approval of new materials and methods of construction. Approval of new materials and methods is a major problem and should be considered by a national body, such as the newly proposed Standards Council of Canada or equivalent. It cannot, in our view, be left to a lesser authority. It would remain with the board responsible for the code provincially to specify where materials complying with appropriate standards may be used.

(b) The Urban Development Institute recommends interpretations of the National Building Code be given by the authorities responsible for its preparation, the Associate Committee. Through the staff of the National Research Council (Division of Building Research) and the various N.B.C. committees, uniform interpretations can be obtained. The provincial board or committee should set up a co-operative arrangement with the Associate Committee to use the available facilities and expertise.

Whatever final procedures are established and adopted, it must be recognized that time delays are costly and must be avoided.

16. Construction Safety Association of Ontario

(a) The Canadian Standards Association, for approval of new materials and methods, often based on performance-type specifications, is presently working quite effectively where it is adopted. To be consistent in striving for uniformity, it would seem that expanding this nation-wide association is probably more desirable than promoting provincial boards. Furthermore, it is difficult to visualize a new material or method which would require attention by one province and not another.

(b) Interpretation of the code should come down from the national body to the provincial board and the provincial board would pass on this information to local municipal officials and inspectors through training courses and seminars sponsored by this board.

17. Ontario Association of Real Estate Boards

Endorsed brief
of Ontario Council, N.H.B.A.

18. Ontario Retail Lumber Dealers Association

Certainly not by any one of the provinces but perhaps on a national basis, as it is felt this is a matter of national significance and if Ontario were to establish such a board it would urge all other provinces to do likewise.

19. Association of Ontario Mayors and Reeves

The Executive of our Association expressed favour with the idea of a provincial board to deal with approval of new building materials and methods. Although the Builders Association may evaluate these products and methods, it is preferable to have an independent board passing judgment and making it known to the municipalities. The

province is the logical level of government to establish such an independent board.

20. Canadian Sheet Steel Building Institute Yes
As noted in our comments to questionnaire No. 5. The best technical words can become meaningless unless interpreted and enforced uniformly.
21. Ontario Municipal Association Yes to both
22. Canadian Steel Industries Construction Council Endorsed briefs of members
23. Ontario Federation of Construction Associations No
It is our understanding that there are facilities at the national level (i.e. National Research Council Canadian Standards Association, Canadian Underwriters Association, etc.) for testing materials and methods of construction. It would be preferable to support and if necessary improve such existing facilities rather than duplicate them on a municipal, regional or provincial level. The matter of interpretation could safely be left to the Associate Committee on the National Building Code.
24. City Engineers Association
Not specifically answered although the brief states that—"This association is of the opinion that enforcement of Uniform Building Standards should and will be by local municipal staffs."
25. Ontario General Contractors No
We would submit that a provincial board would not be necessary if the National Building Code was adopted. We would also point out that greater benefit would flow to the provinces through the pooling of experience and information on a national basis.
26. Canadian Lumbermen's Association No
Absolutely. The setting up of such a board by the Province of Ontario would simply then urge other provinces to do the same and we feel that this is a matter of national significance which should be carried out at the national level. There are already perfectly adequate technically-oriented organizations set up to provide objective answers to most of the questions that would ever be referred to such a board. We refer to the Canadian Standards Association and its laboratories; we refer to the Underwriters Laboratories—to name but two. We also feel that the Division of Building Research of the National Research Council should be the one and only organization to deal with this problem on a national scale. It is probably not inappropriate to add at this point that this brief is being written the day after Mr. Hellyer brought down his report in the House of Commons in Ottawa and you will all know that one of the main areas within that report referred to the perfectly horrible jungle of municipal, provincial and federal regulations which, instead of encouraging and making building easier, does just the opposite. As has often been said, "more boards or governments we certainly can get along very well without."

27. Mechanical Contractors Association Ontario

(a) *Approval of new materials and methods?*

Undoubtedly, if we are to have a uniform building standards code, there will have to be regulatory bodies to deal with materials and methods; since the code is to be provincial, then those bodies should also be provincial.

There should be two sections—one to deal with materials and one with methods.

Whatever facilities are used for testing, the organization directing it should not be the approving body.

The trade associations should be represented on all boards dealing with their trades.

(b) *Interpretation of a uniform code?*

Unfortunately, it seems impossible to frame a piece of legislation which will not require interpretation. For instance, there has been a very considerable amount of difficulty with the National Building Code with respect to Part 7, at least.

We would be inclined to think the same body or bodies which would approve materials and methods would be qualified to render interpretive advice on any provincial uniform code.

The important thing would seem to be to frame a clear-cut, uniform code, to begin with.

Question

8. *Any other comments?*

1. Canadian Manufacturers Association

The Province has a role to play in eliminating much of the fragmentation in standards which now prevails. These efforts should, it is suggested, be directed towards establishment and recognition of national standards. Inspection, directed provincially but administered municipally, should be only for the enforcement of national standards.

2. Canadian Construction Association

The construction industry and the allied professions have already stated their support of the proposal that the Ontario Government have the National Building Code of Canada applied as the standard set of building regulations in the province. Such action is all the more urgent in view of the substantially larger volumes of construction that have been predicted for the years ahead.

The introduction of such regulations on a province-wide basis would not be such a large step as may at first seem to be the case. There is already an Ontario Plumbing Code, provincial regulations in the electrical construction field, provincial statutes governing the installation of elevators, lifts, boilers etc. and others pertaining to the construction of projects in the institutional field and those where members of the public assemble or stay.

Moreover, as mentioned, many Ontario municipalities have already adopted the National Building Code in whole or in part. *National Housing Act* residential loans are granted on the condition that the National Building Code of Canada provisions are adhered to.

The publication of the next revised edition of the National Building Code of Canada makes the introduction of a uniform code throughout Ontario most propitious. It is hoped that your Committee will include in its report to the Minister of Municipal Affairs a proposed schedule covering the adoption of the 1970 edition of the National Building Code and the consolidation of Ontario statutes, standards and regulations in the construction field.

3. Association of Professional Engineers of Ontario

A uniform code must be sufficiently comprehensive to supplant all other codes and arbitrary regulations imposed by the many municipal authorities in the province. Such an overriding ability should be tempered by a procedure to allow the objective consideration of proposals for revision arising from any source before a decision is taken by the ultimate authority. Such a process could eliminate dangerous inconsistencies, and could, similarly, provide for incorporation of desirable rules previously adopted by other authorities.

4. The Ontario Plumbing Inspectors Association

The Executive of the Ontario Plumbing Inspectors Association hereby expresses the opinion on behalf of all its members, who through their status of active and associate members consists of 200 plumbing and drainage inspectors, and 800 master and journeymen plumbers, architects, engineers, health inspectors and manufacturers: That the adoption of a uniform building code for the Province of Ontario would ensure province-wide benefit for its citizens, who are at present subject to a multiplicity of building regulations with a diversity of requirements.

Since the enactment of the provincial plumbing regulations which took place in 1953, there has been a marked improvement in the administrations of such regulations. Since the Ontario Water Resources Commission has made it mandatory for municipalities to carry out plumbing inspection this has resulted in a greater protection of the health and investment of the citizens.

Through concerted efforts in co-operation with other organizations, provincial certification of journeymen plumbers has been assumed by the Ontario Department of Labour, and our next goal is to have this legislation enlarged to encompass master plumbers.

If a uniform building code is adopted it will be necessary to establish legislation at the municipal or provincial level for those engaged in building construction. So far as is known, at present there does not exist any type of legislation for qualification or licensing of building contractors, and it is now possible for a person to establish himself as a building contractor without any type of control or legislation.

This Association also welcomes the knowledge of the establishment of this Committee to study the feasibility of a uniform building code for the Province of Ontario, and on behalf of its members it is sincerely hoped that through its efforts such legislation will successfully be accomplished.

5. Toronto Construction Association

No comments.

6. Provincial Building Construction Trades Council of Ontario

This Council cannot stress too strongly that a uniform code is necessary in this province and a uniform code without proper enforcement and provisions for penalties for violations would be a useless instrument to the general public, especially the buying public who deserve to get dollar value for their investment, particularly when you consider what they really end up paying with the present day high interest rates.

7. Ontario Association of Architects

No additional comments.

8. Specification Writers Association of Canada

Canada is fortunate in having a "National" Building Code. It is not perfect but it is usable, and it forms the basis for many municipal codes across the country. It would seem an unnecessary expense for the Province of Ontario to develop another code, and in a sense, it would be an affront to the Department of Industry, Government of Canada to do so.

It is suggested therefore, that if the province decides to promulgate a new act which forces all municipalities to adopt a uniform code, that a knowledgeable group be commissioned to review the N.B.C. and work with the federal group responsible for the code, updating and modifying it to mutual satisfaction.

Considerable pressure by industry has been brought to bear on the NRC to work with the Ontario Fire Marshal in improvements in the Code covering (1) smoke in high rise buildings and those with fixed fenestration; (2) holes poked through slabs for telephone and power outlets; (3) compartmentalization; (4) highly combustible finishes in exit corridors and stairs; and many other items affecting safety from heat and smoke hazards.

It is sincerely hoped by our Association that adoption of the NBC by the Province of Ontario will speed adoption of the same document by other provinces, thus ending one of the chief causes for higher than necessary costs, and will result in accelerating the pace of building, which is so very necessary between now and the turn of the century.

9. Ontario Municipal Association

No additional comments.

10. Canadian Institute of Steel Construction

The achievement of uniform legislation affecting building is complicated. Many solutions of details hinge on avoiding overlapping of

jurisdictions and inter-relationships of administrative and interpretive bodies. Thus the establishment of one provincial board as a final authority is most important.

11. Engineering Institute of Canada, Hamilton Branch

No additional comments.

12. Canadian Institute of Public Health Inspectors

Public health agencies are particularly well suited to effective enforcement of housing standards. Currently all municipalities in the province are covered on a regional basis. A program of this nature could be carried out effectively by health unit personnel, correlated to their existing duties. Most public health personnel are particularly suited to such a program.

Ryerson Polytechnical Institute, Toronto, are giving a course on housing, which is available to public health inspectors. To provide competent training for any responsible personnel will, no doubt, necessitate establishment of additional study courses.

13. Ontario Council National House Builders Association

Our Council cannot emphasize too strongly its sincere belief that the mandatory adoption of the National Building Code is a necessity in the Province of Ontario. The costs of housing and other construction costs are rising steadily and wasteful practices such as diverse building codes can no longer be tolerated. We welcome the establishment of the Ontario Committee on Uniform Building Standards which has been formed by the Minister of Municipal Affairs. We sincerely hope that its efforts will be successful in achieving this most desirable goal.

14. Office of the Fire Marshal

No additional comments.

15. Urban Development Institute, Ontario Division

The Urban Development Institute is extremely encouraged by the positive step which has been taken by the Province of Ontario, by establishing the Committee on Uniform Building Standards for Ontario to investigate the practicability of adopting a uniform code for the province. It is our hope that their deliberations will result in a recommendation for the adoption of such uniform codes by the province.

We anticipate that there will be some practical problems however, but we are convinced that the long-term gains by the community and by industry far outweigh any short-term problems which may arise.

16. Construction Safety Association

With reference to construction safety, clearly the objective of Supplement 8 is the reduction of on-site construction accidents of all types.

Effectiveness: It has been conclusively demonstrated to the C.S.A.O. that only when the contractor (constructor) himself implements accident prevention measures can there be significant reduction of

accidents. The blue book, "Construction Management Policies for Accident Control and Greater Profit", enclosed, illustrates one actual case at the end of the book. It is also true that contractors will give greater consideration to accident prevention when so directed by the owner. The recommendation in A.P.E.O.'s policy statement, "Responsibilities and Relationships in Design and Construction" (attached), for adopting an addition to the Canadian Standard Form of Construction Contract would be a significant step in accident reduction.

The missing link, however, would be guidelines for the contractor in developing an accident prevention policy. The constructor's efforts must be based on a thorough knowledge of accident prevention measures, and we believe the contents of Supplement 8 would provide such knowledge.

To suggest that Supplement 8 be used mainly by provincial bodies with a responsibility for safety requirements would seem to be an exercise in futility. Such bodies were party to the preparation of the proposed supplement and would probably use it as a useful reference only.

Recommendation for greater effectiveness of supplement: The supplement should be regarded as "Contractor Guidelines for Accident Prevention on Construction Sites".

A change in audience would necessitate a complete change in presentation away from legal or specification language to a down-to-earth approach aimed at foremen.

The A.C.E.C., C.C.A., and E.I.C. should be actively encouraged to add a motivating paragraph to the "Canadian Standard Form of Construction Contract", as recommended by A.P.E.O. In such paragraph, reference should be made to Supplement 8 as the source document for guidelines in accident prevention measures.

17. Ontario Association of Real Estate Boards
Endorsed the submission by the Ontario Council of the National House Builders Association.
18. Ontario Retail Lumber Dealers Association
Any steps taken towards elimination of the multiplicity of regulations should prove most welcome. This it is felt could be accomplished through a uniform building code.
19. Association of Mayors and Reeves
No comments.
20. Canadian Sheet Steel Building Institute.
Provincial building legislation should contain provisions to eliminate outdated and outmoded restrictions. It should give the municipality the power to adopt the following:
 1. Requirements that the building by-laws permit the use of any material, or construction method, meeting the minimum performance standards.

2. Provisions for the adoption by reference of the improved current building and fire codes and other nationally recognized referenced standards.
3. Right of appeal and legal remedies to persons aggrieved by the by-law or its administration, and for that matter the enforcing officer aggrieved by the local court.
4. A compulsory requirement for the periodic review and updating of the by-law.

We believe that better control of stages of work should be provided for in the enabling legislation. Once the permit has been authorized, if the work is not proceeding in accordance with the permit (plan) then the temporary withdrawal of the permit may be undertaken by the municipality.

We believe also the enabling legislation should make appropriate authorization for what might be termed a certificate of occupancy. When the occupancy of a building changes to such an extent that public safety may be compromised, then through reinspection these deficiencies may be determined and appropriate action may be undertaken. By this we do not necessarily mean to use the method as a tool to overcome difficulties of retroactivity. The assessment, health and fire prevention inspectors for example can and do have the right to re-enter buildings.

There are many facets to uniformity and we are naturally pleased that serious attention is being given to the problem through your Committee.

21. The Ontario Municipal Association
22. Canadian Steel Industries Construction Council
23. Ontario Federation of Construction Associations
24. City Engineers Association
No comments.
25. Ontario General Contractors Association

We feel our views are largely revealed in the answers to the preceding questions and in our letter accompanying this submission. We would repeat that the adoption of a uniform code is a most desirable objective and would bring a wide range of benefits to the public and the business and industry of this province.

26. Canadian Lumbermen's Association

We feel that the concept of a national code, and in this regard we have in mind the National Building Code, is proper and sensible and the most logical and economical from all points of view. For years, builders, contractors, and the various trades associated have complained of the multiplicity of regulations, the duplications and the outright contradictions.

Being located in the city of Ottawa we often hear contractors complaining of the fact that if they undertake a job in this city they are forced to work under one set of regulations. If that same contractor then crosses the bridge to Hull, he comes under a different set of building regulations, a different plumbing code and a different electrical code. This causes, if nothing else, a great amount of frustration and extra work and of course this frustration and extra work can be costly in the long run.

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PART 4—Summary of Briefs from Toronto Area Boroughs* and Members of the Toronto Area Building Code Committee

Question

1. *Do you favour a uniform code for the province?*

A. Borough of North York Also considers there is a need for a short form for smaller municipalities and rural areas	Yes Administered by municipalities
B. W. E. Lardner, Member T.A.B.C. Committee	Yes
C. Borough of East York	Yes
D. C. Jarrett, Member T.A.B.C. Committee	Yes
E. Borough of York	Qualified No

Question

2. *Would the National Building Code be satisfactory as a uniform code?*

A. Borough of North York See detailed objections to the present code	No
B. W. E. Lardner, Member T.A.B.C. Committee	Qualified Yes
C. Borough of East York Parts 3 and 4 of the N.B.C. would be good for the Province	Partly
D. C. Jarrett, Member T.A.B.C. Committee	Only if it meets the special needs of major metropolitan areas like Toronto
E. Borough of York	Yes Providing it is adopted as a municipal code and provides for the needs of small and large municipalities

Question

3. *What would be the effect if a uniform code were adopted on*
(a) Cost of Construction?

- | | |
|--------------------------|--------------------|
| A. Borough of North York | Reduction in costs |
|--------------------------|--------------------|

*The City of Toronto did not specifically answer the questionnaire to organizations. See Appendix B for City's comments.

- | | | |
|----|--|--|
| B. | W. E. Lardner, Member T.A.B.C. Committee | Reduction in cost |
| C. | Borough of East York | The cost of construction could possibly be reduced when uniformity has been achieved |
| D. | C. Jarrett, Member T.A.B.C. Committee | Costs would be somewhat reduced for large urban areas. In rural areas costs would increase |
| E. | Borough of York | Unable to comment with authority but would expect some tangible savings |

Question

3. *What would be the effect if a uniform code were adopted on (b) Reduction of on-site problems and off-site problems?*
- | | | |
|----|--|---|
| A. | Borough of North York | Substantial reduction in both |
| B. | W. E. Lardner, Member T.A.B.C. Committee | Reduction in both |
| C. | Borough of East York | Reduction of problems both on-site and off-site, both for the field inspector and plan examiner |
| D. | C. Jarrett, Member T.A.B.C. Committee | Reduction of problems would be considerable |
| E. | Borough of York | Unable to comment with authority but would expect simplification for the building industry |

Question

4. *What other provincial acts or regulations should be studied to make a uniform code most satisfactory?*
- A. Borough of North York
- In addition to *The Planning Act* and *The Municipal Act*, legislation requiring study and amendment includes *The Ontario Energy Act*, *The Boilers and Pressure Vessels Act*, *Elevators and Lifts Act*, *Fire Marshals Act*, *Egress from Public Buildings Act*, *The Theatres Act*, *The Hotel Fire Safety Act*, *The Industrial Safety Act*, *The Tourist Establishment Act*, *The Air Pollution Control*

Act, The Building Fire Safety Design Standards of the Fire Marshal's Office, The Public Halls Act, The Gasoline Handling Act.

B. W. E. Lardner, Member T.A.B.C. Committee

The regulatory bodies at the provincial level are already numerous and appear to be growing. They include, for example:

The Ontario Fire Marshal
Department of Labour, Factory Inspection
Department of Labour, Elevator Inspection Branch
Department of Health
Department of Tourism
Air Pollution Control
Ontario Water Resources Commission

It is clearly not efficient to have so many departments or commissions involved in the issuing of permits and regulations for the control of buildings. When we add to this the departments that have to be consulted at the municipal level:

Planning Department
Building Department
Works Department
Roads Department
Traffic Coordinator
Fire Chief, etc.,

it can be seen that there is some duplication between province and municipal governments and also that, at each level, it would be more efficient if the owner or architect involved had merely to contact one person in one organization in each of the provincial and municipal fields. While it may be difficult to achieve this desirable state of affairs, there is certainly room for improvement and reduction in the number of regulatory bodies at both levels.

C. Borough of East York

The Municipal Act and *The Planning Act* should be up-dated where required and amended.

D. C. Jarrett, Member T.A.B.C. Committee

All aspects of safety, L.C.B.O. regulations, hotel and theatre acts, Ontario and local fire marshals, particularly where local jurisdiction provides authority in excess of or in addition to *The Ontario Fire Marshals Act*, regulations governing the establishment and authority of the municipality operating a fire prevention bureau, plumbing and hydro regulations affecting building construction, and Department of Labour with all jurisdictions.

E. Borough of York

It would seem logical to have all provincial enabling legislation pertaining to planning and buildings concentrated in one act. It

would also seem pertinent to review *The Construction Safety Act, 1961-62*, *The Trench Excavators' Protection Act* and Regulation 471 (Plumbing) in light of a provincial building code with the end result being possible consolidation of all matters to do with building construction.

Question

5. *Do you consider that under certain conditions amendments and revisions to a uniform code might be allowed*

(a) *by municipal authorities*

(b) *by regional authorities*

(c) *by provincial authorities?*

A. Borough of North York

I believe that the discretionary powers for building officials which are presently contained in *The Planning Act* to allow them to permit deviations from the by-law which they may deem proper under the circumstances should be retained. However, if municipal, regional, and provincial authorities are given a free hand to make changes to the provincial code, the uniformity of building regulations will very quickly be destroyed. For this reason, I believe that any changes to the uniform code should only be permitted after the most careful scrutiny by the provincial building code authority, which no doubt will be required to be established. Undoubtedly there are many matters which can logically be permitted to vary from area to area, for example such matters as termite preventative measures, projections over public property, signs and advertising devices, etc., but strict control must be exercised over such changes to insure that the fire protection and design standards and exit facilities are kept uniform throughout the province.

B. W. E. Lardner, Member T.A.B.C. Committee

Amendments and revisions to a uniform code should be allowed by municipal authorities in the form of appendices to a standard code; but the province should insist upon a uniform format that draws attention clearly to the variations from the standard. Under our present structure of local government, the municipalities are the correct field for this type of decision. Under no circumstances should regional or provincial authorities get into this act. The situation is already sufficiently complex with two levels of government, i.e., national and municipal, in the field. The more levels attempt to create a position in building code definition, the more obstacles there will be to make adequate progress in the application of advanced technology to building construction.

C. Borough of East York

In my opinion, municipal building commissioners who are responsible for building code enforcement would be the responsible authorities to recommend updated building codes.

- D. C. Jarrett, Member T.A.B.C. Committee
 (a) & (b) Municipal and regional authorities should not be allowed to amend or revise a uniform code as they would thus destroy the very essence of the uniformity desired. Any amendments should be promulgated by provincial authorities and only after the most careful scrutiny.
- E. Borough of York
 (a), (b) & (c)—I would think that all three authorities should have the ability to make allowances for local conditions without undermining the general condition of uniformity.

Question

6. *Should a training course be initiated for municipal building officials and inspectors?*

- A. Borough of North York Yes
 There is no doubt that a training course for municipal inspectors is greatly needed, and as quickly as possible. The modern building code is a highly complex document capable of being understood by only the most experienced officials. Furthermore, advances in modern building technology have been too complex for many of today's building inspectors to cope with. It would appear therefore that two related training courses are required, the first for building officials, oriented to the requirements of the uniform building code, and the second for building inspectors, oriented more towards modern building technology, construction materials and techniques. The latter course would place emphasis on the inspectional aspects of construction.
- B. W. E. Lardner, Member T.A.B.C. Committee Yes
 While the province should keep well out of the details of a building code, it could play a very useful part in helping to improve the efficiency and effectiveness of individual municipal building officials and building departments. A program in the province in this field could have several parts:
- (a) Courses on specific portions of building technology, designed specifically for the engineer and for the inspector. Safety under the present regulations, would form a part of such a program.
 - (b) Development and promotion of more efficient method of processing applications for building permits. The principle of checking in detail the structural calculations of each building should be dropped. Substitute for this the requirement that all applications for building permits for buildings of more importance than, say, a single family dwelling, be accompanied by drawings and specifications prepared by a registered professional engineer, together with a signed and stamped statement of professional opinion to the effect that the professional engineer or architect responsible is satisfied

that the drawings and specifications conform with the requirements of the relevant building code. This procedure would be policed by making spot checks on designs. Incompetent or misleading reports would be referred to the association of professional engineers or architects for disciplinary action.

- (c) There should be a continual re-examination and re-appraisal of procedures and policies by municipal building officials and inspectors. The province can stimulate this by providing facilities and encouragement for regular meetings.

C. Borough of East York

A training or refresher course would be a must for building inspectors and all officials concerned with building code enforcement.

D. C. Jarrett, Member T.A.B.C. Committee

Yes

E. Borough of York

Yes

Question

7. *Should there be a board set up by the province to deal with:*

(a) *Approval of new materials methods*

(b) *Interpretation of a uniform code?*

A. Borough of North York

Yes

B. W. E. Lardner, Member T.A.B.C. Committee

No

Both these items are much better done at the national level for exactly the same reason that the code itself is more efficiently handled on a national basis.

C. Borough of East York

(a) I would recommend the province should provide office space and financial assistance and encourage the existing Toronto Area Code Committee to accept materials for approval when such materials have been tested by a recognized authority, such as C.S.A., H.L.C., and A.S.T.M., providing, of course, such materials could then be accepted as complying with existing code standards.

(b) Code standards and regulations could also be interpreted by the approvals committee, and in special cases, the assistance of a legal adviser.

D. C. Jarrett, Member T.A.B.C. Committee

(a) This could be done provincially although it might be better achieved nationally through the federal Department of Industry. However, it may make it too all-embracing and thus too long a procedure required for the approvals.

(b) Yes.

E. Borough of York

Yes

Question

8. Any other comments?

A. Borough of North York

It is suggested that consideration be given to the following steps:

- (a) *The Construction Safety Act*, *The Ontario Water Resources Commission Act* and the plumbing regulations thereunder, and the electrical regulations of the H.E.P.C., together with their existing administrative arrangements, would be left unchanged.
- (b) Section 31 of *The Planning Act* and all sections of *The Municipal Act* dealing with building and fire protection standards would be repealed.
- (c) A new act could be prepared, entitled "Building Safety Act", or something similar, together with regulations thereunder which would contain all building and fire safety requirements. The act and the regulations would be administered and enforced by municipalities, and would also be binding on all provincial departments. An abridged version would be prepared for the smaller municipalities. The act would provide for minimum qualifications of building officials and inspectors, and possibly for an appeal board for uniform code interpretations.
- (d) Amend the many provincial acts containing regulations relating to building and fire safety such as those previously noted by deleting all the building and fire regulations.
- (e) Eliminate the necessity for architects or builders to have their plans approved by various provincial departments as well as municipal building departments. At the present time, architects must frequently submit their plans to the Department of Labour, the Ontario Fire Marshal, the Liquor License Board, Department of Highways, Department of Tourism and Information and various other provincial departments before the municipal department can issue a building permit. If the goal of one set of building regulations for the province is achieved, approval of the plans by the municipal building department should be sufficient. With the prospect of regional government, and larger units of administration, most municipalities will be able to employ competent staff to administer the building code.
- (f) A provincial building department or building code authority should be established to be responsible for the preparation of the code, for keeping it up to date at all times, for approving new materials and construction techniques, and related matters. Such authority could also be responsible for establishing a training course for building inspectors, and for generally assisting municipal building officials in applying the code.

APPENDIX D

The Ontario Building Officials Association



TO: The Official Responsible for Building Inspection.

In order to evaluate the type of instruction most suited to the Building Official, the Association has been requested to determine the qualifications of the personnel in your Municipality presently performing this type of work.

To be effective, such qualifications must be related to the type of work performed.

Please list the number of Inspectors in your Municipality and their academic or technical qualifications. i.e. Plumbing Inspectors, Building Inspectors, Plan Examiners, etc.

Municipality _____ Population _____

Total Staff _____

Number and Type
of Inspector.

Qualification

Since there is a degree of urgency in obtaining this information, would you please take 5 minutes right now, and return this form to: I.R. Robertson, Secretary-Treasurer, O.B.O.A. c/o Building Dept. City Hall, Hamilton, 10, Ontario.

ANALYSIS OF QUESTIONNAIRE ON QUALIFICATIONS OF BUILDING INSPECTORS

A total of 445 questionnaires were mailed with 183 replies received.

(1) *Of municipalities of less than 10,000 population—*

- 8 reported no building official.
- 3 reported having a professional engineer who was also town engineer or planner.
- 44 reported having a part time inspector or where the work was done, some other official, all of these reported no particular qualifications.
- 72 reported that the inspector had varying amounts of practical experience, mostly former tradesmen, licensed plumbers, retired contractors with experience varying from very little to 40 years.

(2) *Of municipalities from 10,000 to 50,000 population—*

- 1 reported no official as position was vacant.
- 33 reported having a professional engineer, one of whom was also town engineer.
- 44 reported officials with practical experience as contractors, tradesmen, etc. Usually the academic qualifications were higher than in the small municipalities—varying amount of experience.

(3) *Of municipalities of over 50,000 population—*

- 6 of 14 reported professional engineers on staff and all reported the remainder of the staff were tradesmen or had experience in the construction field.

APPENDIX E

Approving and Certifying New Materials and Methods of Construction, a report prepared for the Committee by Stuart F. Smith.

A National Building Code uniformly accepted across the Province will provide the basis for a major improvement in construction methods.

Authority over all building matters rests in the hands of the provincial governments. The provinces in turn have delegated this authority in organized municipalities to local municipal governments. It is only through the local municipality that approval in its full and legal sense can be given to plans for a building or for the materials that are used in that building.

The Committee recommends that through an Advisory Council procedures be established for the approval and certification of new materials and methods of construction. This should expedite innovation in the building industry in connection with building materials, products, components and processes.

It would be preferable if approval and certification of new materials and methods of construction could be carried out nationally rather than provincially, but in the absence of a national organization it would be most helpful if it could be done on the provincial level. Yet the ultimate objective of any provincial certification and approval body should be subject to the ultimate creation of a national authority for this purpose.

At the municipal level, the building inspector, fire inspector, plumbing inspector and other officials are the people who must understand the National Building Code and apply it to the construction techniques of the buildings within their jurisdiction.

It is difficult for a building inspector—regardless of how well trained—to be able to inspect a construction project intelligently and ensure that the construction conforms to the National Building Code. It is especially difficult if he does not have an understanding of the quality and performance of the materials that are used in that construction.

The problem he faces is compounded by today's rapidly changing technology which is producing new products and components for the construction industry made of new materials and of new designs which he, the inspector, cannot possibly evaluate. He is, therefore, subject to personal confusion, aggravated by the salesmanship of suppliers of new materials who are anxious to have their products accepted within the jurisdiction of the building inspector.

The inspector must be assisted by being given the means of determining whether the materials, components and methods that go into the construction projects conform with a nationally accepted standard. He must also be given the means of assuring himself that the individual components meet those standards.

Manufacturers for the construction industry need viable standards to which they can manufacture their products. They must know that their products will be acceptable to the building inspector without fear of favour or prejudice because of the inspector's lack of knowledge of these products.

In considering how a standard for construction materials or methods should be prepared, it is essential, first, that it be definitely needed and, second, that it be designed as a performance standard. The need must exist to require fitness for purpose, adequate performance, structural safety and the protection of the health of the occupants of the building.

When a need for a standard has been determined, it is then important to develop a standard that establishes the performance required of that product. The welfare of all concerned must be kept in mind. It is not enough to say that the owner of the building must be protected because the occupants of the building, the builder, the inspector, and the manufacturer of the product must be protected too.

In developing a standard, the best method found to date of resolving everyone's interest is to have that standard prepared by a committee of knowledgeable representatives of all interested parties. When the standard has been prepared and published, it becomes the vehicle for all users and other interested parties for determining the performance requirements of a building material.

Existing products can be accurately measured against their respective performances to determine if they meet the intent of the standard. New products will be introduced to the market and these should also be measured against existing performance standards. If there is no existing standard, the manufacturer of a new product would assess the market situation and consider whether a request should be made to have a new standard prepared.

It has been widely accepted that a new standard should not be written just for the sake of having a new standard. But if standards have already been established for a product type, or for competitive material in connection with the new product, then the manufacturer should take steps to initiate a standard to cover the requirements of his product.

There are several standard-writing books in Canada, none of which are acceptable to building inspection authorities in all provinces. It is important, therefore, that with the adoption of a uniformly acceptable National Building Code there be a uniformly acceptable national standard-writing body.

The importance of an acceptable standard-writing body is not only national but international. Many countries have a national standards body and there is a free interchange of standards among these national bodies. We live in a country that depends to a large degree on the technology developed in other countries. We must have a strong, nationally accepted standards organization, working in close co-operation with other national bodies so that the knowledge gained in one country can be adapted readily to the needs of our country. Obviously this concept will materially aid our ability to promote international trade and a freer exchange of goods and services.

Having a well prepared standard in existence does not help the inspector or the manufacturer until there is a standard test method and suitable testing agencies available to determine whether the manufacturer's products perform the function as laid down in the standard.

There are a number of testing organizations in Canada, some dealing with specific products and others with more general matters. These testing organizations must be impartial because they have a direct and profound impact on the marketing of a product. They must be appreciative of trade secrets so they can protect the manufacturer and the products they are testing.

The development of standard test procedures should be subject to the scrutiny of a representative committee—preferably the one that prepared the standard. This will insure that standard test methods do not call for more than the performance required of the standard.

The standard test methods, when established to measure product performance against a standard, must be constantly reviewed and updated to meet changing requirements in construction methods and technological improvements.

There is a serious risk that a testing agency will, on its own, require manufacturers to submit products for testing before there is a standard prepared or before the need for a standard exists. Control of the operation of testing agencies must be exerted by a national standards body. There must be a means of appeal against arbitrary actions of testing agencies and standards writing bodies. The appeal should be to the originators of a National Building Code who have the national responsibility for establishing and maintaining a code for building construction.

IV. SUMMARY

The following recommendations will summarize the above report.

1. The universal recognition and acceptance of a National Building Code.
2. The establishment and recognition of a nationally accepted standard-writing organization for the preparation of building standards and specifications.
3. The establishment and recognition of nationally accepted testing agencies to provide the testing services to measure building materials, products and components to a national standard.
4. The establishment of a procedure for appealing against improper or poorly developed building standards and test methods.

APPENDIX F

Acts and Regulations Reviewed with Provisions about Building Construction

The Air Pollution Control Act:

Section 3(1), section (2)(a) to (d) and (g) to (j), sections (4), 6, 7(1) and 7(3).

The Boilers and Pressure Vessels Act:

Sections 1, 2, 3, 4, 5, 7, 12, 15, 46 and 49.

The Bridges Act:

Section 4.

The Building Trades Protection Act:

Sections 5, 6, 7, 8, 9, 10 and 11.

The Cemeteries Act:

Sections 15(1)(c), 41 and 49.

The Charitable Institutions Act:

Sections 2, 4, 7, 8, 9, 11, 12, 13(n) and regulations.

The Children's Institution Act:

Regulations.

The Children's Mental Hospitals Act:

Sections 9(a) and 9(b).

The Construction Safety Act:

Sections 1, 2, 3, 5, 6, 15a, 21 and regulations.

The Department of Education Act:

Section 12(1) and regulations.

The Department of Labour Act:

Sections 10 and 60.

The Department of Tourism and Information Act:

Sections 4 and 7.

The Egress from Public Buildings Act:

Sections 1 and 4.

The Elevators and Lifts Act:

Sections 2, 8, 14, 27(1)(b), 27(1)(j), 27(1)(l), 27(2), 34, 38, 41 to 45 and regulations.

The Energy Act:

Sections 9(1)(5), 9(2) and 9(4).

The Fire Marshals Act:

Sections 3(1), 19(2), 19(4), 19(12), 19(16) and 21 to 26 and regulations.

The General Welfare and Assistance Act:

Regulations.

The Highway Improvement Act:

Sections 1, 34(2) and (5 to 8), 38(2)(e), (3), (4), (5), (7), (8) and 65 (1 to 3).

The Homes for the Aged Act:

Sections 9, 26 and regulations.

The Homes for Retarded Persons Act:

Section 12 and regulations.

The Homes for Special Care Act:

Regulations.

The Hotel Fire Safety Act:

Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 15, 16, 19, 20, 22, 26 and regulations.

The Industrial Safety Act:

Include engineering data sheets.

The Liquor Control Act:

Sections 8, 9, 11, 30 and 51.

The Liquor License Act:

Section 85 and regulations.

The Maternity Boarding Houses Act:

Sections 6 and 11.

The Mental Hospitals Act:

Section 2, section 5(2)(e), 5(2)(n), 5(2)(o), 5(2)(s), 41, 46, 56, 60(2) and 66.

The Municipal Act:

Sections 6, 17(1 and 2), 18, 243, 247 (1, 1a and 4), section 377(15, 24, 43 to 48, 50, 69, 71), section 379(1, 7, 8, 12, 13 to 15, 17, 23, 30, 32, 33, 35, 38, 43, 43a, 68, 79, 80, 110 to 114, 120, 122, 127, 128, 129a, 130, 132, 133, 135), sections 381(1, 2, 13), 382 (1 to 3), 386 (1, 3), 387(1), 390(2), 396(1), 399(5, 6, 8), 401(1 to 3, 5 to 8, 10 to 13, 15, 19, 482(1, 2) and 486.

The Nursing Homes Act:

Regulations.

The Ontario Energy Board Act:

Sections 7 and 28(c).

The Ontario Water Resources Commission Act:

Sections 16, 18, 47 and regulations.

The Planning Act:

Sections 30(1, 2, 4, 9, 18), 30a and 31.

The Power Commission Act:

Section 97.

The Private Hospitals Act:

Sections 6, 11, 16 and 24

The Private Sanitaria Act:

Section 2.

The Psychiatric Hospitals Act:

Sections 3 and 4(2).

The Public Halls Act

The Public Health Act:

Sections 4(b) and 4(g), section 6-10, section 6-16, section 6-30, section 6-33, section 6-34, section 6-35, section 6-38, sections 8, 9, 48, 82, 83, 99, 110, 111, 122, Schedule B and regulations.

The Public Hospitals Act:

Sections 4 and 35.

The Public Lands Act:

Sections 16 and 71.

The Public Works Act

The Rest Homes Act:

Regulations.

The Sanitaria for Consumptives Act:

Sections 2(2), 5 and 9.

The Theatres Act:

Sections 11, 12, 15, 17, 22, 47, 49, 55, 56, 57 and 63.

The Tourists' Establishments Act:

Sections 1, 2(1), 3, 4, 5, 6, 9, 12 and regulations.

The Trench Excavators' Protection Act:

Regulations.

APPENDIX G

The Associated Documents of the National Building Code of Canada 1970

Part 1, Administration

Part 2, Definitions

Part 3, Use and Occupancy

Part 4, Structural Design (in seven Sections)

Part 5, Materials

Part 6, Building Services

Part 7, Plumbing Services

Part 8, Construction Safety Measures

Part 9, Housing

Supplement No. 1, Climatic Information

Supplement No. 2, Fire Performance Ratings

Supplement No. 3, Commentary on Part 3

Supplement No. 4, Structural Design Manual

Supplement No. 5, Building Standards and the Handicapped

Residential Standards (for CMHC)

Canadian Code for Farm Buildings

Canadian Plumbing Code

Canadian Construction Safety Code

Building Code for the North

Short Form of the National Building Code

Canadian Standards in Building Codes

APPENDIX H

The National Fire Code of Canada

Table of Contents

PART I

- Section 1.1 Short Title
- Section 1.2 Application
- Section 1.3 Enforcement
- Section 1.4 Permits and Licences

PART II

- Section 2.1 General Requirements
- Section 2.2 Protection of the Public
- Section 2.3 Industrial and Commercial Operations

PART III

- Section 3.1 General
- Section 3.2 Hazardous Materials

APPENDIX I

Ontario Government Departments Interviewed

Representatives from the following Ontario government departments appeared by invitation and were interviewed by the Committee:

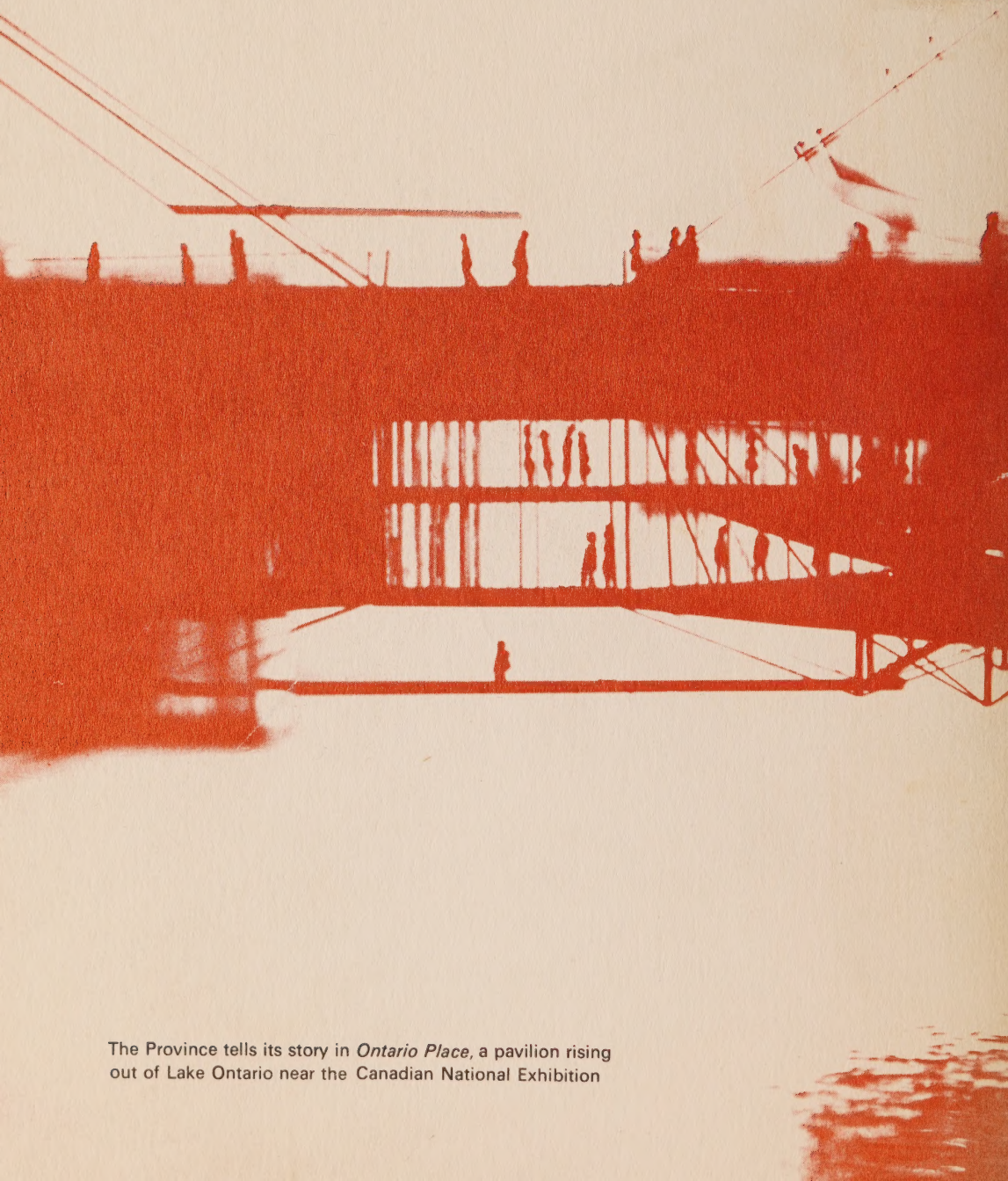
Department of Public Works
Department of Trade and Development
Department of Tourism and Information
Department of Labour
Department of the Attorney General
Office of the Ontario Fire Marshal
Department of Energy and Resources Management
Hydro Electric Power Commission of Ontario
Ontario Water Resources Commission

These questions were used as leads for the discussions:

1. Would you be in favour of adopting the National Building Code of Canada provided items not covered by the national code (e.g.—Advertising Signs) are added?
The resulting code to be called (provisionally) “The Ontario Code Covering Building Construction”.
2. What would be your opinion to the date that such a code could be brought into being? January 1971 or January 1975? Could there be interim steps taken assuming 1975 was the date chosen?
3. Is there need for a course for the training of building inspectors? If so, should there be different grades of inspectors or, to put it another way, could inspectors be classified depending on the amount of training they are willing to take?
4. How should inspectors be appointed—
 - (a) By the municipality?
 - (b) By the municipality but approved by a provincial authority?
 - (c) By the province with agreement by the municipality?
5. Does the act governing your service conflict with the National Building Code? Is that conflict major or minor? To what degree does the National Building Code not cover the regulation of your service? Could they be brought into line?
6. Do you consider it advisable that, if an Ontario code is passed, there be inaugurated an Advisory Committee composed of members of construction, industry, government and a legal advisor to interpret the code; to approve new materials and procedures and possibly serve as an appeal board from rulings of inspectors of municipalities?

7. Do you see any serious problems in having the various regulations of the many departments of the Ontario Government administered by one department as far as the public is concerned? It is assumed that the various regulations would be covered in the Ontario code.
8. If so, what present department or departments (if two are required) would be the best?
9. Do you consider *The Municipal Act* and *The Planning Act* require major revision if the above ideas are adopted or do they need revision in any case?
10. Any other questions members of the Committee should like to ask.

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The Province tells its story in *Ontario Place*, a pavilion rising out of Lake Ontario near the Canadian National Exhibition